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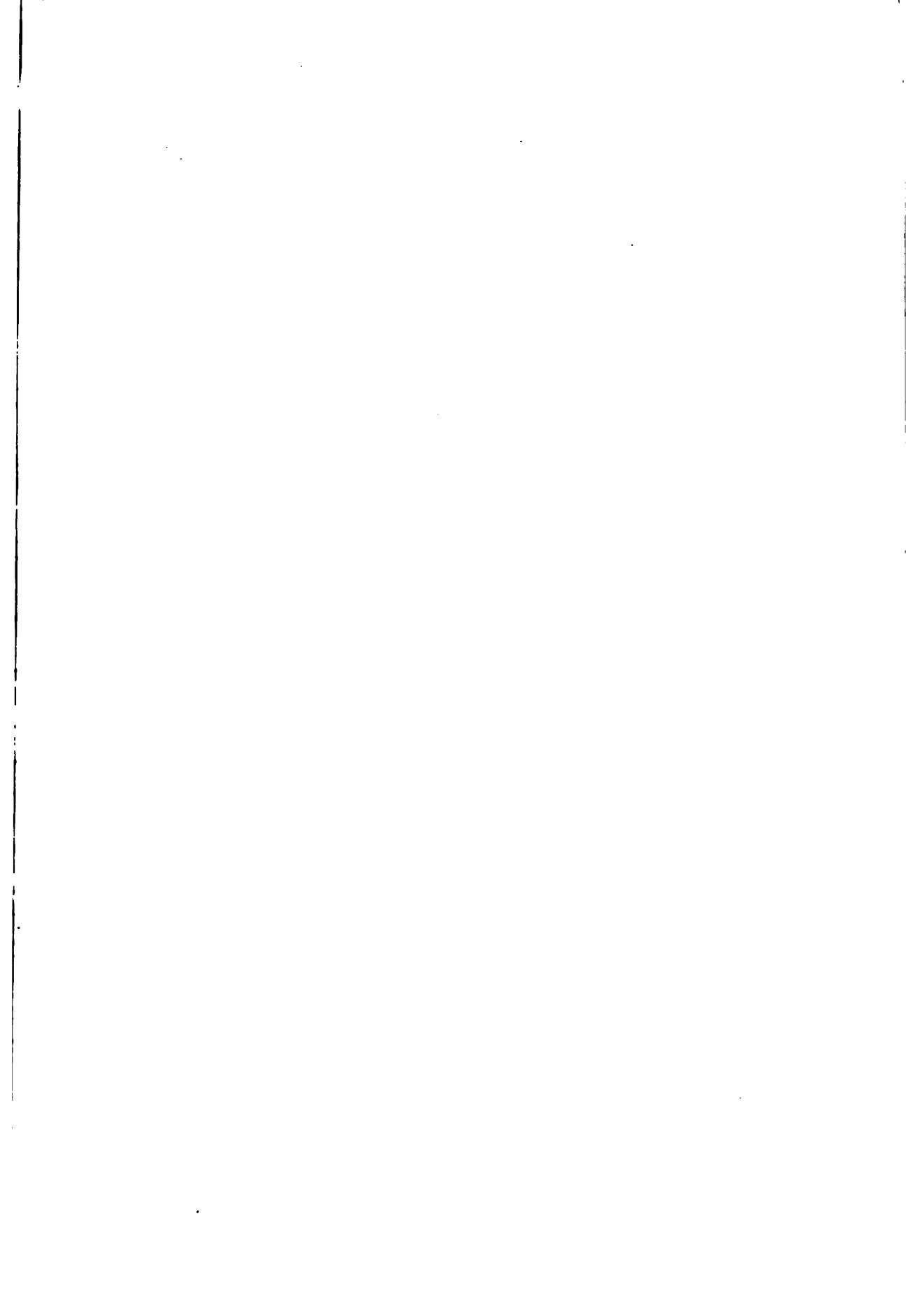
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THE
POTTERY AND PORCELAIN
OF
THE UNITED STATES

AN HISTORICAL REVIEW OF AMERICAN CERAMIC
ART FROM THE EARLIEST TIMES
TO THE PRESENT DAY

BY

EDWIN ATLEE BARBER, A.M., PH.D.

HONORARY CURATOR OF THE DEPARTMENT OF AMERICAN POTTERY AND PORCELAIN IN THE
PENNSYLVANIA MUSEUM; MEMBER OF THE HISTORICAL SOCIETIES OF
PENNSYLVANIA, WISCONSIN, AND VIRGINIA, ETC.

WITH 223 ILLUSTRATIONS

G. P. PUTNAM'S SONS

NEW YORK

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PREFACE.

FOREIGN writers would have the world believe that the United States can boast of no ceramic history.

Even our own chroniclers have, singularly enough, neglected a branch of our industrial progress which is not altogether insignificant nor devoid of interest. On the contrary, it can be shown that the fictile art is almost as ancient in this country as in Great Britain, and has been developed in almost parallel, though necessarily narrower, lines.

The need of a history of the Pottery Industry in America has long been felt, and has led to the preparation of the present volume, which, it is hoped, will be found to possess some interest to the student of ceramics, as well as to the collector.

The author claims that his work is not a mere compilation, but has been based almost entirely upon thorough personal investigations. Some of the time-honored fallacies which have been perpetuated by compilers have been omitted from this record, and special care has been taken to avoid the use of statements which could not be substantiated. This result could only be reached by patient and systematic research, by a thorough study of

the products of the potteries of the United States, and by consultation with intelligent potters in the leading establishments of the land. Much of the material contained herein appears for the first time, and will doubtless form the basis for other histories which will follow later.

It does not come within the scope of this volume to include the history of every pottery which has been established since the time of Columbus, or which is now in operation in this country. Such a detailed review would, even if desirable, be manifestly impossible in an undertaking of this compass. The main purpose of the work is to furnish an account of such of the earlier potteries as, for any reason, possess some historical interest, and of those manufactories which, in later days, have produced works of originality or artistic merit. Confining myself necessarily to these limits, I have endeavored here to present a condensed but practically complete record of the development of the fictile art in America during the three centuries which have elapsed since the first settlement of the country.

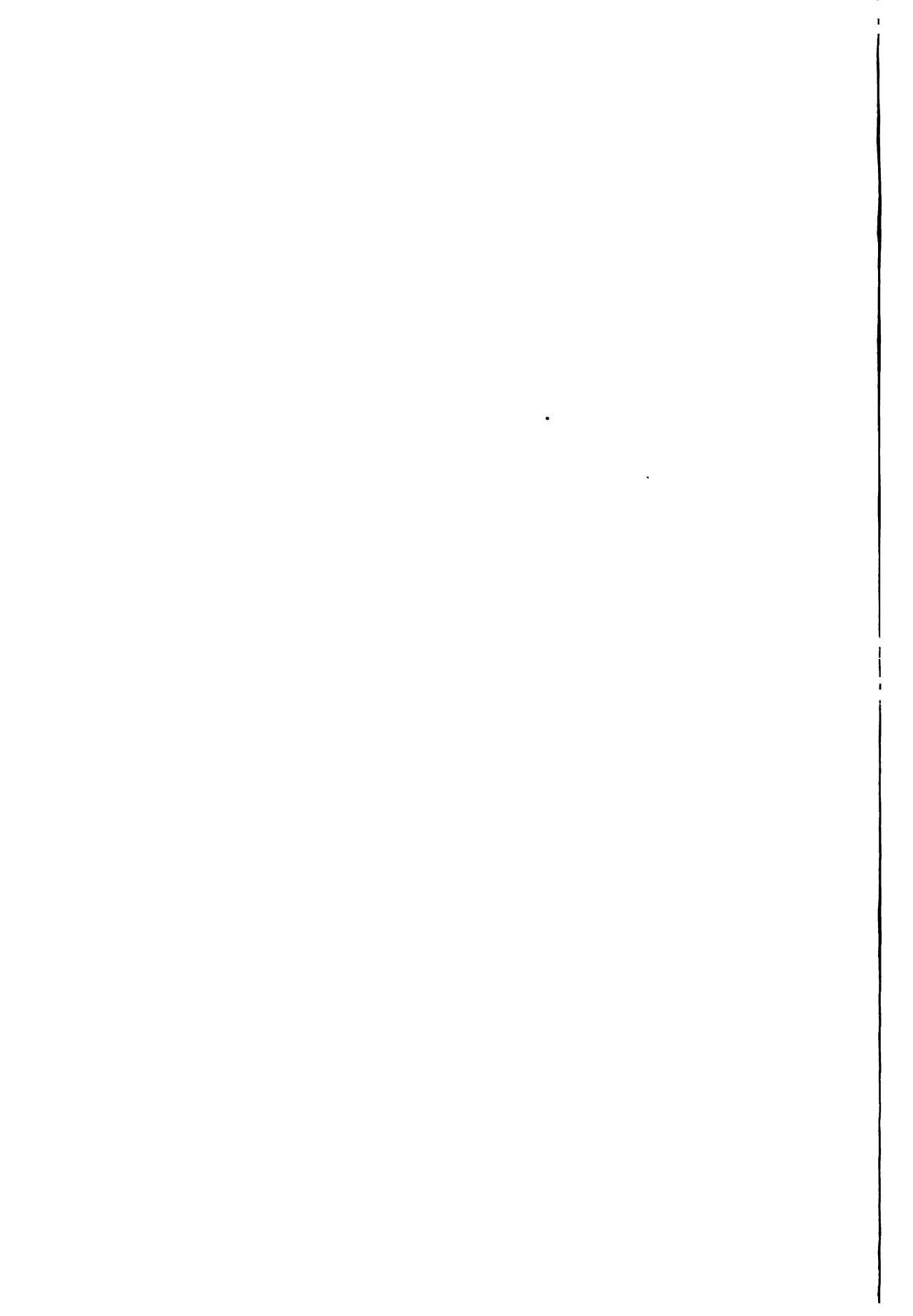
I beg leave to express my sense of indebtedness to all who have contributed in any manner to the information contained herein, and I desire particularly to extend my thanks to Prof. Edward S. Morse, Mr. D. F. Haynes, Prof. Isaac Broome, Mr. W. W. Taylor, Mr. L. W. Clark, Hon. J. Hart Brewer, Prof. William H. Holmes, Dr. Marcus Benjamin, and Mr. Edward Lycett, for valuable assistance and advice, and to the publishers of the *Popular Science Monthly* for the use of cuts which appeared in my articles in that journal on American

Pottery and Porcelain. Toward those who have refused or withheld information we shall not be uncharitable. The illustrations used in the following pages are, for the most part, entirely new, and have been made from fully identified examples. I have endeavored to select from the numerous treasures of art which have been placed at my service those which, in my judgment, best illustrate the various classes of wares produced in this country. I am highly gratified to be able to call the attention of lovers of art to the remarkable progress which has been made in ceramic manufacture in our midst within the past fifteen years, and if my efforts shall result, in any measure, in the breaking down of that unreasonable prejudice which has heretofore existed against all American productions, I shall feel that I have been abundantly rewarded. America, within the next few decades, is destined to lead the world in her ceramic manufactures, and the future student will be entitled to know something of the earlier struggles of the art in this country.

E. A. B.

WEST CHESTER, PA., Sept. 1, 1893.







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CHAPTER I.

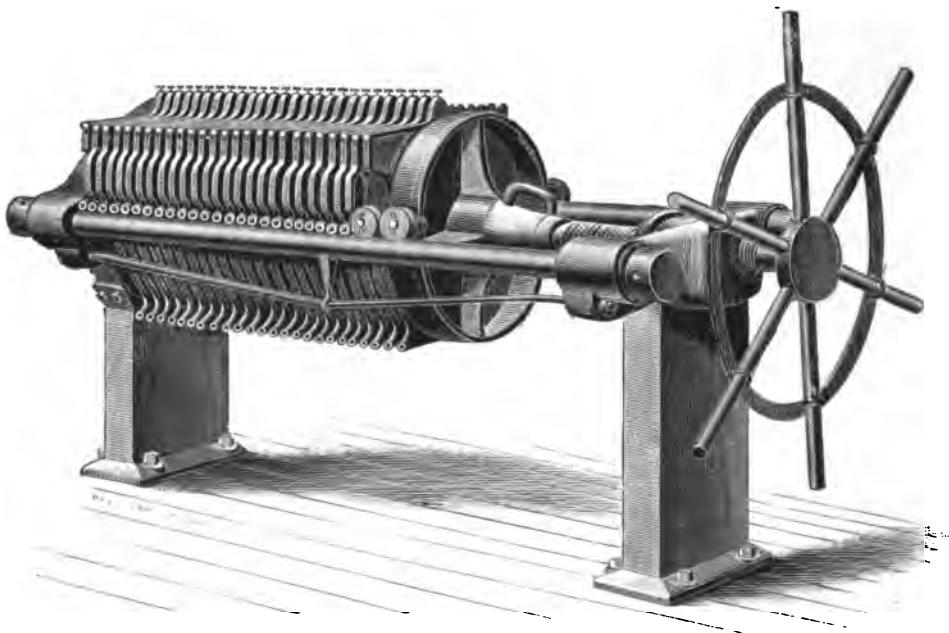
PROCESSES OF MANUFACTURE.

PREPARATION OF POTTERY CLAYS.

THE methods formerly used in this country in preparing the clay for the potter's hand were of the most primitive character. The crude material was simply thrown into a tank or pit and manipulated with a spade or paddle, then taken out in large lumps and cut through and through with a fine wire stretched between the two hands of the workman, the pebbles and other foreign substances being picked out as the work progressed.

In 1835 a patent was issued to Adam Weber, of Womelsdorf, Berks Co., Pa., for a contrivance for *Purifying Potters' Clay*, consisting of a hollow metal or wooden cylinder with a wire sieve placed across the bottom, through which the moist clay was forced by means of a block or piston, fitting the cylinder closely, and worked by a lever, the gravel being left on the wire netting inside of the tube. A similar apparatus is still employed in some of the potteries where coarse earthenware is made.

Slip-kilns were formerly employed to dry the clay. The materials were first mixed with water to the consistency of cream, and then passed through a fine sieve, after which the slip was subjected to heat until sufficiently dried to be fit for use. I have in my possession a drawing of the old-fashioned slip-kiln used at the Phila-



I.—THE BOYCE CLAY PRESS, WITH TWENTY-FOUR CHAMBERS.

adelphia china factory of Messrs. Tucker & Hemphill, in 1832. This consisted of a long, horizontal brick fire-box, at one end of which were built three partitions or pans, one after the other, in which the slip was poured, and flues passing around the sides furnished the heat necessary to dry the clay to the proper consistency.

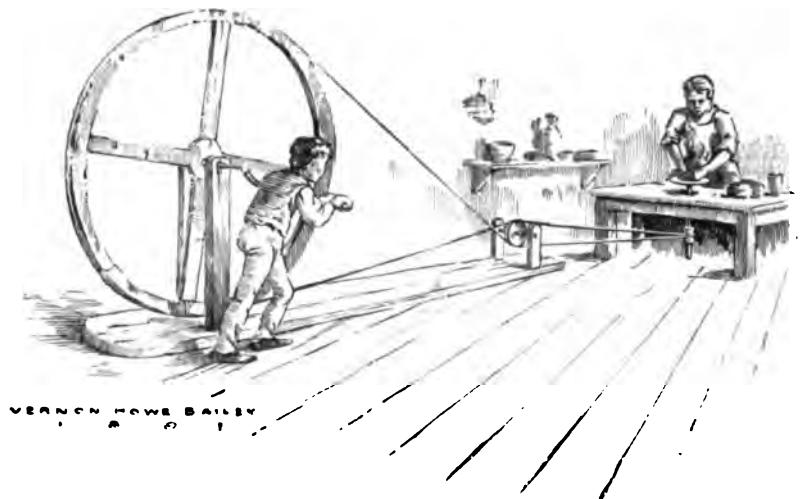
To-day most of the clay used in potting is carefully washed before being shipped to the manufacturer, and the flint and feldspar are finely ground at the quarry. These materials, in due proportions, are placed in tanks called "plungers," with the necessary amount of water, and worked, tons at a charge, by machinery, in a short space of time. The mass is then sifted and afterwards forced through canvas bags held in what is termed a "press," the surplus moisture thus being expelled. An improved hydrostatic press, made by Mr. A. J. Boyce, of East Liverpool, Ohio, and now used in many potteries with great success, is shown in the accompanying illustration.

TOOLS AND MACHINES USED IN THE MANUFACTURE OF
POTTERY.

The potter's wheel used well into the present century was a clumsy and primitive affair. It consisted of a perpendicular beam, generally about two feet in height, surmounted by a circular disk a foot or so in diameter. At the lower extremity of the beam or axis was a horizontal wooden wheel, four feet across, possessing four inclined iron spokes which extended from the beam to the rim of the wheel, which the workman pushed around with his feet. He sat on a framework behind the wheel, while in front were piled the lumps of clay to be manipulated. This contrivance was termed a "kick-wheel."

A great advance was made in potters' machinery a few years later, or in the first quarter of the present

century, when the "throwing-wheel" was introduced into the more prominent factories. This was composed of a plate or disk which was revolved by means of a belt which passed around two spindles and extended to a large vertical fly-wheel operated by a crank in the hands of a second person. This upright wheel usually measured four, five, or more feet in diameter, depending on the rate of velocity desired, the larger the wheel, the greater the

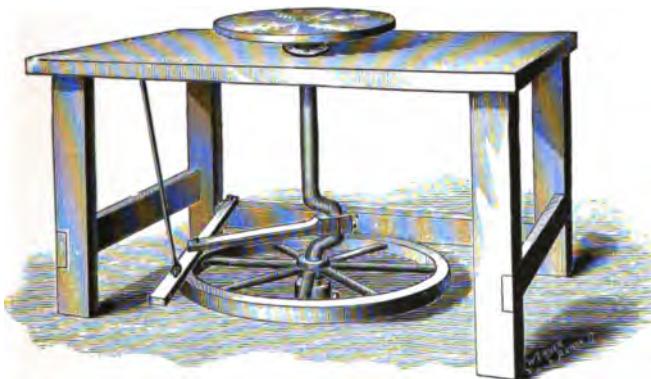


2.—OLD-FASHIONED "THROWING-WHEEL."

speed to be attained. The revolving plate at which the potter sat was often ten or more feet from the crank-wheel, and the apparatus was therefore cumbersome, besides requiring the services of an extra hand. This device was a great improvement over the old "kick-wheel," as it secured uniformity of motion and enabled the operator to devote his entire attention to his work. This style of wheel, in time, was superseded by the more simple

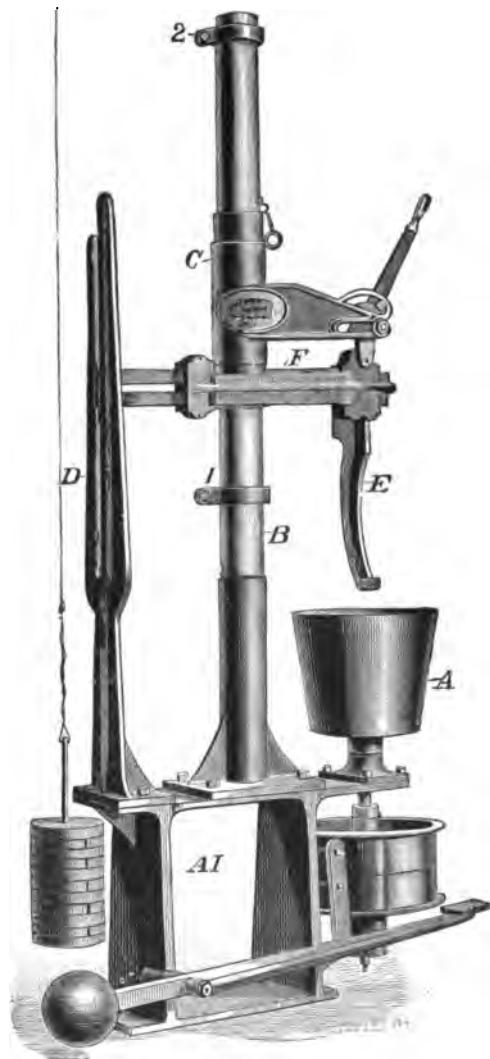
form which is worked by a treadle with the left foot of the operator, and is still used in many of the smaller potteries. The subjoined engraving represents one of these "kick-wheels," as made at the present time by Messrs. Taplin, Rice, & Co., of Akron, Ohio. This firm also manufactures a power-wheel, such as is now operated in the larger factories, which is so constructed that the velocity can be regulated by a foot lever.

"Jiggers" and "jollies" now greatly facilitate the



3.—“KICK-WHEEL” (AS NOW USED).

manufacture of circular and swelled vessels, such as jars, jugs, crocks, cuspidors, and umbrella jars. A "jigger" is a machine which carries a revolving mould, in which the clay is shaped by a "former," which is brought down into the mould and held in place by means of a lever. We give on page 6 an illustration of one of the jiggers made by Mr. Peter Wilkes, of Trenton, N. J. *A* is the jigger-head or receptacle in which the mould is placed, which is screwed fast to the revolving spindle. *B* is a stationary iron column on which the frame or sleeve *C* slides up or



4.—“ JIGGER.”

down. *D* is an iron fork which prevents the frame *C* from turning. *E* is the former or profile which shapes the interior of the vessel. The lever or pull-down, above the horizontal bar *F*, gives a transverse motion, and forces the former toward the side of the mould. 1 and 2 are adjustable collars which are fastened by screws; 1 regulates the distance to which the collar or frame *C* must be lowered to give the proper thickness to the bottom of the vessel, while 2 acts as a stop to prevent the frame from being thrown up too high.

A "jolly" is a somewhat similar contrivance, consisting of a revolving disk or wheel on which the mould is placed. This is used principally for making plates, saucers, and articles termed "flat ware," its speed being regulated by a lever pressed by the foot of the workman.

The potter's lathe is a machine similar to the power-lathe used for wood turning, excepting that it can be reversed by pressure of the operator's foot. A wooden block, made of the proper size for the cup or other article that is to be turned, is screwed to the spindle of the lathe.

Other labor-saving machines have been applied to the making of pottery to some extent, but, owing to the nature of the materials used, it seems probable that the greater part of the work must always be largely done by hand.

MOULDS AND MOULD-MAKING.

The plaster-of-Paris moulds which are so generally used in the manufacture of pottery are made from a finely prepared plaster, and the mould-maker in a modern pot-

tery is an important personage. The model for any piece of ware, a jug for instance, having been designed and finished, is taken in hand by the mould-maker, who makes a mould from it that will part in the middle. This is called the "block mould," and is carefully preserved. From this a "case" is made, which is a replica in plaster of the model. From this "case" as many working moulds as may be required can be made. Plaster-of-Paris moulds are used in the manufacture of all wares except such as are "thrown."

PROCESSES.

Throwing.—When a vessel is made by hand on the potter's wheel, the process is called throwing. This is the oldest method of pottery-making employed by civilized man and is still in use in many potteries. A lump of clay, of the proper weight for constructing a particular kind of vessel, is thrown on the revolving disk, and into this the potter thrusts his thumbs, and by drawing them outward and upward the plastic clay is rapidly thrown into the form of a vessel, the walls being drawn up between the fingers and thumbs. A wet sponge is then pressed against the inside of the revolving clay to smooth the lining, and a small piece of leather is held against the outside surface to render it perfectly regular and to make the walls of uniform thickness. By manipulating the clay in this manner, the thrower can draw it up into any desired form, after which a fine wire is passed across the disk to cut the bottom of the vessel loose, when it is lifted

off and placed on a board to dry, and the process is then repeated.

Turning.—When the ware has sufficiently dried, it is placed on the spindle blocks of the lathe, and the turner, with a thin steel tool, shaves the vessel to the proper thickness, then, reversing the lathe, he burnishes it until the surface is even and smooth. Incised ornamentation is sometimes added by the use of a small wheel, bearing an engraved device on the edge, called the "runner," which is held in a frame. When placed against the piece of ware, while the lathe is running rapidly, the design is impressed around the circumference of the vessel. A deft hand is required to do this work.

Pressing.—In making plates, saucers, and other flat ware, the workman, who is called a "presser," throws a thin "bat" of clay upon the mould which forms the face of the piece. This is placed on the revolving "jigger," and the back is shaped by a tool which is pressed upon it. The piece is then set aside to dry, after which it is taken from the mould, the edges trimmed, and it is ready for firing.

In making hollow pieces, such as pitchers, covered dishes, and pieces of similar shape, the clay is carefully pressed into the mould, made in two parts, which are then brought together. The interior is then smoothed and the seams of the mould are covered with a strip of clay which is worked off smoothly and the mould is set aside until the plaster has absorbed sufficient moisture to allow the piece to be safely removed. The handles, knobs, or spouts, which have been made in other moulds, are then

fitted to the ware and fastened by slip. Then the vessel is smoothed and finished and sent to the "green room" to dry.

Casting.—This process consists in filling a hollow mould, which is divided into two parts and held together by a strap, with liquid clay or slip, which is allowed to stand the proper length of time and then emptied out. The porous plaster having absorbed a portion of the moisture from the slip, which is in direct contact, retains a thin shell the exact shape of the mould, which in a short time can be readily removed. In the manipulation of large vessels, where the weight of the shell would cause it to fall out when the mould is turned over to empty the slip, a method has been devised in Europe for forcing compressed air into the interior of the mould to take the place of the slip as it passes out, and thus hold the shell in place. By the method of casting, mould seams are partially avoided and a greater uniformity of thickness and evenness of surface are obtained. Thin wares, such as Bel-leek china, are usually made by the casting process.

KILNS.

The construction of pottery and porcelain kilns, or ovens, as they are usually termed in England, has changed but little in the past fifty years. They are conical structures, built solidly of red brick, with a lining of fire-brick, and are generally about sixteen feet in diameter inside, and about the same in height to the crown or ceiling, above which the walls are narrowed and drawn upward like a chimney to furnish a draft for the fires. The ex-

terior of the kiln is bound by a series of heavy iron hoops or girdles to give it greater strength. Around the base, at equal distances, are the fire-boxes or chambers which communicate by openings with the interior above and below. These vary in number, from eight to ten or more, according to the size of the kilns, which in some cases are considerably more than sixteen feet in diameter. In some of the Western kilns slight modifications have been made in the fire-chambers for the employment of natural gas, which is used quite extensively for fuel instead of coal.

Kilns used for the manufacture of hard porcelain are somewhat different, consisting generally of two stories, the upper one being used for baking the biscuit, which requires less heat than is necessary for the glazing, which is afterwards accomplished in the lower story where the heat is more intense. Thus while a lot of ware is being baked the first time in the upper portion of the kiln, another lot of ware, which has already passed through the first firing, is being glazed below. This is the reverse method usually employed in burning earthenware and soft porcelain, which are either fired longer in the biscuit, at the same temperature, or are subjected to a greater degree of heat in the first firing.

METHODS OF FIRING WARES.

Ware that is to be burned in the kiln is protected by placing it in boxes or "seggars," sometimes called "saggers," made of buff-colored fire-clay. These are made of different shapes and heights, suitable for different forms of vessels. The ware is placed in these in layers of white

sand. The first seggar, filled with the "green" ware, is then placed in the bottom of the kiln close to the side. Around the rim of the seggar a strip or "wad" of moist clay is then laid, after which another seggar is carefully placed on top, forming a cover for the one below. In this manner the seggars are piled to the crown of the kiln, the "wads" or cushions of clay helping to steady the pile, or "bung," as it is called, and preventing the smoke and fumes from coming into contact with the ware inside. Other tiers of seggars are placed close to each other until the interior of the kiln is full, after which the doorway is bricked up and plastered over with clay to make it perfectly tight. The fires are then started and raised to the requisite degree of heat necessary to bake the biscuit. The length of time for firing varies, according to the body or composition of the ware, from twenty-four to forty-eight hours, usually the latter and sometimes even longer.

When the biscuit ware is ready to be glazed the "dipper" immerses it in a tub filled with the glaze, which is of the consistency of cream, and, after shaking off the surplus liquid, passes it to a boy who places it on a board at his side. The ware is then carried to the glost kiln for the second firing. In placing the pieces in the seggar, great care must be exercised to prevent them from touching, because when the glaze melts in the heat of the kiln they would stick together and be ruined. The larger pieces are placed in the bottoms of the seggars, on coarse sand or finely broken flint, but flat pieces must be supported, one above another, by fire-clay pins with sharp, triangular edges, which are inserted through holes in the walls of the

seggar. Stilts, which are three-armed pieces of clay with points on both sides, fired hard, are also frequently employed to keep apart certain articles.

DECORATION.

Pottery and porcelain are decorated either *over the glaze*, or *under the glaze*. In *overglaze* decoration, vitrifiable colors are applied to the glazed surface of the finished ware and are fixed at a comparatively low temperature in the enamelling kiln, which does not injure or destroy them. In *underglaze* decoration the colors are placed on the ware either in the "green" or unfired state, or on the biscuit before it is glazed, and must be subjected to a heat sufficiently intense to fuse the glaze which is afterwards applied. The colors which will stand this great heat are limited in number and are more liable to change in the kiln; consequently the manipulation of underglaze colors requires considerable experience and skill to produce certain and satisfactory results.

Decorations may be *hand-painted* or *printed*, and both methods may be employed either before or after the ware has been glazed. In the printing process which is used extensively at the present time, the designs are engraved on copper plates and transferred to the surface of the ware. Mineral colors, which have been mixed carefully with a prepared printing oil, are used to print the design on linen-tissue paper, which is then laid upon the ware and rubbed with a piece of soft flannel until it adheres evenly and firmly. In a few hours the paper is plucked from the ware and the printed design is then touched up

with color by hand, and gold lines are then frequently applied. In the underglaze process the print is usually washed off, instead of being removed by plucking, and then the ware is fired in the enamel kiln sufficiently to burn the oil out of the color. It is then dipped in the glaze and sent through the glost kiln. Gold decorations can be added after the glost firing, if desired.

A quality of decoration, equal in durability to underglaze work, is often obtained by printing on the glaze with underglaze colors and then firing the ware a second time in the glost kiln, which produces an effect that is difficult to distinguish from real underglaze printing.

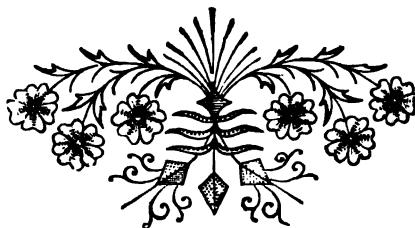
The raised gold work, seen on various grades of ware at the present day, is produced by tracing over a free-hand or printed design, which has been placed upon the glazed ware, with a yellow paste which gives the relief. This is fired in the decorating kiln and afterwards covered with either bright or dull gold and then fired again.

Majolica ware is decorated by applying colors mixed *with the glaze*, with a brush, or by dipping, or by both methods; the colors being soft blend easily at a temperature somewhat higher than the usual enamel or overglaze heat, and thus beautiful effects are often secured. By the same method, soft or bone porcelain may be decorated by painting on the dry glazing before the latter has been fired. In so-called Barbotine, and some other styles of decoration, the colors are applied to the ware in the clay state or when partly fired, and a finish akin to that of majolica ware is thus secured.

Rich mazarine blue, and some other brilliant colors,

are obtained by laying the color on the glost ware and then firing in the glost kiln. This process is repeated, in many cases, several times before the depth and evenness of color desired are secured.

The beautiful king's blue of the Sèvres porcelain is obtained by applying the color to the biscuit ware, which is afterwards subjected to the intense heat of the "sharp fire."





CHAPTER II.

AMERICAN WARES AND BODIES.

EARTHENWARE is a term commonly used for all kinds of pottery wares suitable for household purposes, not strictly porcelain.

Queensware is a name given to an ivory- or cream-colored ware, first made by Josiah Wedgwood for Queen Charlotte about 1762. The word is still used generally in the Middle and Southern States as a generic term applied to all kinds of household pottery wares.

Faience, as defined by Webster, is "a collective name for all the various kinds of glazed earthenware and porcelain." This term was probably first used in this country about 1876 to designate a decorative ware made in France from coarse materials, finely modelled and enriched with painted slip decoration under the glaze. It is now applied to underglaze pottery made in this country, notably the Rookwood pottery of Cincinnati, the faïence of Chelsea, Mass., and the Lonhuda ware of Steubenville, Ohio. The name was also used in connection with a line of vitreous, colored wares, made by Mr. D. F. Haynes of Baltimore, Md., in 1883.

Red Earthenware is made of a good quality of brick

clay, being usually of a red or reddish-brown color. It is often glazed inside, and sometimes all over, with a lead glaze, which reveals the red color of the body. It is also frequently covered with a dense black glaze. Flower-pots, bean-pots, pie-plates, and roofing-tiles are familiar examples of red ware. Formerly such ware was rudely decorated with colored slips, or coated with yellow clay and embellished with incised designs. Of late years it has been wrought into *cupidors*, *jardinières*, and umbrella-stands, japanned or painted in various colors with floral and other decorations, when it is sometimes called lava ware.

Terra-Cotta.—Under this head may be gathered many grades of pottery, from the soft Albert ware, which is lightly fired and sold in the biscuit state, in ornamental forms for decorating, to the drain-pipe, which is essentially a stoneware. *Architectural terra-cotta* is very highly esteemed for building purposes. This is made largely of vitreous clays, and is usually of a dark-red color, but often of a rich cream tint, and also pure white. It is non-absorbent and very durable, withstanding fire, great pressure, and the corroding action of the elements. Its decorative character in detail work or in massive designs gives it great value with the architect. Fancy chimney-pots, garden vases, and other ornamental articles are closely allied to architectural terra-cotta in body.

Stoneware is made from bluish clays which vitrify at a strong heat, and is glazed by throwing common salt into the kiln when the ware is nearly fired. Stoneware often shows great beauty, and, decorated with cobalt blue,

ornamented on the lathe, or etched with a dull point when soft, reveals artistic merit. It is strong, non-absorbent, and seen generally in crocks, jars, jugs, beer-mugs, drain-pipe, and chemical apparatus.

Yellow Ware is manufactured from natural buff-colored clays, and covered with a transparent glaze. It is frequently decorated with bands of white or brown slip, and is used chiefly for baking purposes, in the form of nappies, bowls, pipkins, and the like.

Rockingham Ware, as made in the United States, is simply yellow ware covered with a dark-brown glaze, and often mottled by spattering the glaze before it is fired. The name was first applied to pottery made in England about 1796, at the Swinton works, which were located on the estate of Charles, Marquis of Rockingham. The wares made at this place were claimed to be of superior quality, and to have received their mottled-brown color from repeated firings.

Majolica Ware derived its name from a peculiar lustred ware thought to have originated in the island of Majorca. The term was afterwards used to designate the brilliantly glazed and enamelled wares of Italy. Very beautiful majolica wares have been made, within the past twenty years, by English and Continental potters. Later, the manufacture was undertaken by European and American potteries, but the quality was gradually cheapened and degraded, until the article became a drug on the market.

Cream-Colored Ware, known as "C. C." ware by the trade, because of its yellowish tint in former years, is the cheapest grade of reliable white ware. It is now made

of excellent quality, almost equal in appearance to the higher grades of goods, and is used for cooking and table purposes.

White Granite, often called *Stone China*, or *Ironstone*, known as "W. G." by dealers, is a solid, serviceable ware, of a bluish tint, more largely used in the United States than any other grade of crockery. It is made of the materials common to all white wares, and to some porcelains. Flint, feldspar, kaolin or china clay, and ball or marl clay enter into its composition. This is made into toilet, dinner, and tea sets and many other useful articles, both plain and decorated.

Semi-Porcelain, also known as *Paris Granite* or "P. G.," *Opaque China*, and by various other names, is much the color of French china, and the best brands are so nearly akin to porcelain as to show translucency in the very thin parts. It is largely wrought into the finer grades of articles for family service, and decorated for dinner, tea, and toilet sets, often in an elaborate manner.

Porcelain, or *China*, is always easily recognized by its vitreous fracture, fine grain, non-absorbent quality, and, unless very thick, by its translucency. It has for centuries commanded the admiration of men and is the highest development of the potter's art. In firing, it is brought so near to the melting point that great durability is secured and, ordinarily, immunity from crackling of the glaze, or "crazing," as it is termed.¹ In so-called soft porcelain, bone dust or phosphate of lime is largely used.

¹ The Crackle ware of the Chinese and Japanese is subjected to certain processes to produce this effect.

The thin porcelain, called *Belleck*, takes its name from a town in County Fermanagh, Ireland, where it has been made for a number of years to great perfection. It is noted for its great thinness, light weight, and its beautiful, iridescent or pearly glaze, variously tinted. It is now made in the United States of excellent quality. The body is akin to Parian.

Parian derives its name from its resemblance to a beautiful, ivory-tinted marble found in the island of Paros. It is a fine grade of porcelain, the ingredients being thoroughly ground together. It is usually moulded by the "casting" process, in the same manner as most thin china, and possesses the translucency and vitreous nature of porcelain, but is seldom glazed.

The porcelains of Europe and the East have been divided by ceramic writers into two classes,—*hard paste* and *soft paste*. This would seem, in a great measure, to be too arbitrary a classification for our American wares, since the degrees of difference are often so slight that it is impossible to determine where soft porcelain commences and hard porcelain ends. By a gradual process of evolution the lines of distinction are entirely obliterated, and we find that porcelain is made of every degree of hardness, from the softest bone china to the hardest ware with no trace of animal or vegetable substances. The tests which have been recommended by the books are, therefore, of little value in deciding this vexed question, but it may be well to enumerate these various tests and state the reasons why they cannot always be relied upon.

1ST. *The File Test.*—It has been stated that hard

porcelain, sometimes called *natural* porcelain, or *pate dure*, cannot be scratched with a file. As a matter of fact, a good file will mark the hardest porcelain. This test, therefore, is unreliable.

2D. *The Foot Test.*—It is held by some that the appearance of the foot, or that portion of a vessel upon which it rests while being fired, is an indication of its hardness, and when rough and unglazed the piece is hard paste. In many instances soft porcelain presents the same appearance, because the glaze has been removed from the foot to prevent adhesion to the bottom of the sagger in which it is fired. This test, therefore, cannot be depended upon.

3D. *The Fire Test.*—This, in the hands of an experienced person, would be decisive, but, as it might result in the destruction of a valuable piece of ware in the intense heat of the kiln, it is impracticable.

4TH. *The Chemical Test.*—The action of acids upon porcelain, in a finely powdered state, would reveal the presence of phosphate of lime, which, in the form of bone ash, enters largely into the composition of soft porcelain, sometimes called *artificial* porcelain, or *pate tendre*, but the collector will hardly care to subject a rare specimen to the disintegrating process in order to decide the question.

5TH. *The Color Test.*—If on holding a piece of ware to the light it shows a mellow ivory tint, it may be considered strong evidence that there is sufficient bone in its composition to entitle it to be classed as soft porcelain; but should the color possess a bluish tone it would in-

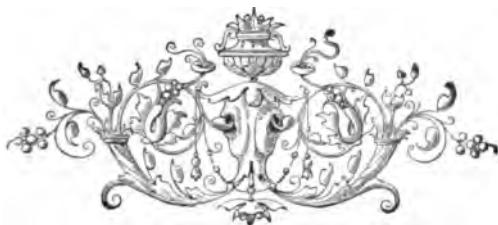
dicate a hard or vitreous body. Where, however, the proportion of bone is small, this test would prove unsatisfactory.

6TH. *The Fracture Test.*—Should accident befall a piece of porcelain and the fractured edge present a glossy, vitreous appearance, extending quite through the ware, making it difficult to determine where the glaze that covers the outside begins and where it ends, it may with confidence be called hard paste. If, on the contrary, the fracture shows a granulated surface and seems dry and chalky, or upon touching it to the tongue reveals a slightly absorbent quality, and the glaze shows distinctly at the margins as thin layers of glass, it may safely be called a soft paste. When there is only a small proportion of bone, however, the body will be found to glisten to some extent, and this test, therefore, is not always conclusive.

A connoisseur, by the touch, the color, the weight, and the general appearance, may, with some degree of certainty, be able to decide to which class a piece of porcelain belongs, but in many cases it may be quite impossible to settle this point without destroying the piece.

There seems to be no conclusive test by which the collector can always distinguish hard porcelain from soft. Nor do we consider this a matter of any great importance. If the object under consideration possesses genuine beauty of form, or real merit in the decoration which has been placed upon it; if it has historical value, or represents some particular phase in the ceramic development of any country or locality, it loses none of its interest because the owner or the practical potter is unable to decide in which

group to place it. The knowledge of the exact proportion of bone contained in its composition cannot add or detract from its real value as a work of art, and such questions may properly be left for the investigation of the practical manufacturer.





CHAPTER III.

ABORIGINAL POTTERY.

IT is not deemed advisable to enter at this time into any extended consideration of aboriginal and prehistoric fictile productions of the United States, a field which has already been so fully covered by the publications of the Smithsonian Institution, our public museums of archaeology and ethnology, and various scientific societies, and the numerous monographs by the author and others, which have appeared in the magazines of the past twenty years. We may, however, very properly devote a few pages to a brief review of the art as practised by the native races of this portion of North America. We are confronted at the outset with the difficulty of classifying the potteries of aboriginal tribes, the solution of which must necessarily involve us in the consideration of ethnic relations, which does not come within the scope of the present work. For the sake of convenience, we shall divide the territory now embraced in the United States into three great bands, extending from north to south, or approximately so, commencing on the extreme east with the Atlantic Slope, then passing to the Mississippi Valley, thence to the belt west of the Continental

Divide, each of which is marked by a distinct and characteristic culture status. In taking up these several divisions of native ceramic art, we shall find that, while we are compelled to ignore, to some extent, the chronological sequence, the successive stages of development of the art followed the geographical arrangement from east to west. Thus we have three groups of pre-Columbian pottery, beginning with the crude manufactures of the Eastern States, advancing to the more artistic wares of the mounds, and ending with the highest native development of the ceramic art in the United States, as exemplified in the creations of the Pueblo or house-building tribes of the far West. Having adopted this classification, let us proceed to the consideration of these three divisions in the order named.

I.—INDIAN POTTERY OF THE ATLANTIC COAST.

The nomadic tribes which were found in possession of the country by the first white settlers, in the sections now known as the New England, Middle, and Southern Atlantic States, had scarcely progressed beyond the first stages of savagery. Their implements were fashioned from stone, and their utensils consisted of rude steatite pots, mortars dug out of rough boulders, and a few earthen vessels. These latter were moulded by hand from coarse clay, intermixed with sand and broken shells, and being imperfectly baked, and consequently of an extremely friable nature, were easily destroyed. For this reason, few entire examples of their handiwork in clay have descended to us. Broken fragments, however, are

plentiful among the *débris* of abandoned camps, and these serve to show the shapes of vessels and give us an idea of the primitive style of ornamentation employed in their manufacture. In form they were generally spherical, usually possessing a circular orifice or heavy collar, but

sometimes surmounted with a square, triangular, or pentagonal mouth. The decoration consisted of incised lines scratched in the clay with a stick or stone, or more elaborate markings produced by the impressions of fish vertebræ, cords or thongs, and indentations made by the thumb or fingernail. Occasionally a moulded head or face was added in relief.

Perfect specimens of this ware, found on

the Atlantic Slope, and now preserved in public and private collections, are comparatively rare. Perhaps the most valuable and interesting series of such pots is that in the collection of the Wyoming Historical and Geological Society, of Wilkes-Barre, Pa., two of which



5.—INDIAN POT, PENNSYLVANIA.
COLLECTION WYOMING HISTORICAL AND
GEOLOGICAL SOCIETY.

are here figured. The first is a globular vessel, seven inches in height, and is one of the most perfectly preserved examples known. It was found in a cave in Wyoming Co., Pa., in 1856. The entire surface is covered with thong markings, except around the neck, where are horizontal lines which may have been made with a flint or bone implement (Ill. 5).

The second example is a fine illustration of this type of vessel. It measures thirteen inches from base to lip and possesses a scalloped frieze two and a half to three inches in depth. This unusually large specimen was discovered among the rocks in Wayne County, Pa. The ornamentation is of an entirely different character from that of the former. The spherical body is devoid of any attempt at embellishment, while the surface of the heavy rim is covered with incised lines and notches (Ill. 6). A somewhat similar pot, in the extensive collection of Mr. James



6.—INDIAN VESSEL, PENNSYLVANIA.
COLLECTION WYOMING HISTORICAL AND
GEOLOGICAL SOCIETY.

Terry, at the American Museum of Natural History, New York City, differs in the form of the frieze, which is triangular at the mouth. This is perhaps as fine a ceramic relic of the Lenni-Lenape Indians as can be found. It was discovered many years ago at Bushkill, Pa., and is eight inches high, the frieze being nearly one-third the height of the vessel.

The Mohawk, Cayuga, Onondaga, and other tribes of Indians in New York State made vessels of a some-



7.—CLAY PIPE (ONONDAGA), NEW YORK.

what similar nature, of which a few perfect examples have been found in ancient remains, which have been assigned to the first half of the seventeenth century. Of these, the most curious are the so-called toy cups, from Mohawk sites, some of which measure scarcely an inch in diameter.

Clay smoking pipes are frequently met with among the relics of the Eastern tribes. Examples of the trumpet form, with curved stem, and often moulded heads of birds

and animals, are common in certain localities in the State of New York. Rev. W. M. Beauchamp, who has made a special study of these interesting objects, furnishes the accompanying illustration of a characteristic form from an Onondaga site near the town of Pompey, supposed to belong to the latter half of the seventeenth century. The bowl and stem are in one piece (Ill. 7).

A vase over fourteen inches in height and eleven in diameter, with pentagonal mouth, also in the Terry collection, is a beautiful example of elaborate decoration. The incised markings cover every portion of the surface and are so arranged as to produce a most pleasing effect. In this specimen, which was found at East Windsor, Connecticut, we have a *chef-d'œuvre* of eastern Indian art. It is remarkable for its large size and excellent condition (Ill. 8).

The modern Cherokee Indians of North Carolina continue the manufacture of an earthenware similar in material, form, and decoration to the ancient vessels already described. A characteristic example of recent work, made by women at the East Cherokee Reservation,



8.—VASE FROM CONNECTICUT.
TERRY COLLECTION.

and owned by the Bureau of Ethnology at Washington, is represented in Illustration No. 9, which has been furnished by Mr. W. H. Holmes, who states that the diameter at the rim is nine inches. The interior is finished with a black polish produced by smother firing. The outside is of a brownish color of baked clay and covered with incised pattern made by means of an engraved stamp.



9.—MODERN CHEROKEE. BUREAU OF ETHNOLOGY.

Many quaint allusions are made by the early historians to the custom of smoking among the Indian tribes of North America. One chronicler wrote in the seventeenth century, that the Floridian “*salvages*” possessed “a kinde

of herbe dried, which, with a cane and an earthen cup in the end, with fire and the dried herbes put together, do sucke thorow the cane the smoke thereof, which smoke satisfieth their hunger, and therewith they live foure or five dayes without meate or drinke.” This “cornet of cliae,” which was a common accessory to the accoutrements of every warrior, is described by another as “a little pan, hollowed at the one side, and within

whose hole there is a long quill or pipe, out of which they suck up the smoak which is within the said pan, after they put fire to it with a coal that they lay upon it." The smoking utensils described by these writers were pipe bowls made for the insertion of a separate reed stem, and not, as in the case of the New York examples, fashioned with head and stem in one piece. In the old Indian remains of Pennsylvania and New Jersey both forms are found.

II.—MOUND-BUILDERS' POTTERY OF THE MISSISSIPPI VALLEY.

Earthen vessels from the mounds are far more numerous and consequently present much greater variety in form and design. In general, it may be said, the texture of the clay is finer and the baking has been more thorough and uniform. The most typical form of mound vessel is probably the spherical water bottle, simple in outline, with elongated neck. Jars, basins, and urns, however, have been found in great numbers, and the modifications and variations of these are almost limitless. Many are truthfully moulded after human, animal, and vegetable models, while others of more simple form are embellished with incised geometrical devices, in which the spiral or volute decoration is conspicuous. Not infrequently pieces are found which show traces of having originally been covered with a dark red pigment, and while some archæologists make a distinction between the painted and unpainted wares in point of time, and possibly of origin, there seem to be no sufficient grounds for separating the two. On the contrary, both varieties of ware have been found in the

same mound and evidently represent the same era of American art.

The stone graves of Tennessee have yielded an abundance of pottery, which is similar in all essential points to the vessels taken from the mounds. In the absence, therefore, of conclusive evidence of a different origin or period of manufacture, we shall include them all under one general head.

The subject of Mound-Builders' pottery is too vast to properly review in a work of this nature. All that can be here attempted is a brief description of a few characteristic and striking forms. We must leave the comprehensive treatment of this branch of American ceramics to others who are making the subject a special study. Every student of pottery is familiar with the great collections of mound vases which are preserved in the public museums of our principal cities. Cincinnati, Cambridge, Washington, New York, Davenport, St. Louis, and Philadelphia, all possess valuable series of these objects, and many private collections throughout the country include examples of greater or lesser interest.

In Illustration 10 we have a modification of the water bottle form, a vase with three legs terminating in well-moulded human heads, from a mound in Richmond County, Georgia. This piece is seven and a half inches high and is a Tennessee type. It has a plain, slightly polished surface, but was probably painted in colors originally. For the illustration of this curious example, I am indebted to Mr. W. H. Holmes of Washington, D. C.

Another exceedingly interesting piece is a vase in the

form of a human head, from Pecan Point, Arkansas. The face is coated with a light yellowish-gray slip, the remainder of the surface being colored red. Incised lines occur on the face to represent tattooing, and the closed eyes and parted lips were evidently intended to convey the idea of death. This is not a pleasant object to look upon, but as a work of aboriginal art it possesses considerable merit (Ill. 11).

The oldest smoking pipes, of which we have any knowledge, were made by the builders of the mounds, who expended an enormous amount of time and labor and exercised a surprising degree of skill in the production of curious receptacles for the smoking material. These objects were usually fashioned from the hardest stones, and were frequently carved to represent certain birds and animals. They were made in one piece, the bowl rising from the centre of the curved base or platform, one end of which served the purpose of a handle, whilst the other projection formed the stem. Clay pipe-bowls have also been discovered in some of the mounds, which are presumably of a more recent origin.



10.—MOUND VASE, GEORGIA.

To the same people may be attributed the large earthen vessels bearing impressions of textile fabrics, found in Gallatin County, Ill., and elsewhere, which are supposed to have been employed by their makers in the manufacture of salt.



II.—HEAD VASE. ARKANSAS.

The theory, which has been recently advanced, that the Indians were the builders of the mounds of the Mississippi Valley, and consequently that the makers of the rude pottery of the Atlantic Coast were the descendants of the authors of the mound vases, cannot be discussed here, nor can it have any bearing on the classification which we are forced to adopt, which is a geographical, rather than an ethnical, one.

III.—PUEBLO POTTERY OF THE PACIFIC SLOPE.

Of an entirely different character is the ceramic ware made by the ancient house-building races of the far West and still produced by their modern descendants, the Pueblo, Zuñi, and Moqui Indians of New Mexico and Arizona. Throughout the ancient ruins of this section, and extending from the western borders of Colorado, through Utah to the Gila River, embracing the valleys of the Rio Grande, the San Juan, and the Colorado, sherds and vessels, in all stages of entirety, are found in astonishing abundance. Three distinct varieties were manufactured,—one, a corrugated ware, formed by the spiral coiling of ropes of plastic clay and afterwards indenting the surface with thumb marks or covering it with basketry or woven fabrics, which left their impress on the yielding material; the second, a red painted ware; the third, a whitish ware, coated with white or red clay, and painted in vari-colored designs. Of the first class, the most common vessels were the large urns in which the makers stored their meal or buried the incinerated bones of their dead. Remarkably well preserved examples of this type have been discovered in the cañons and cliffs of this section, carefully hidden away in recesses where they have remained unmolested until taken from their resting-places by some enthusiastic explorer. An exceedingly perfect specimen of this class, fifteen inches in height, which is entirely covered with an indented design produced by an ingenious arrangement of thumb pressures in the coils of clay, was discovered by Mr. Charles McLoyd of Durango, Colorado, in the winter of 1890-'91, in the ruins of a cliff house in Grand

Gulch, Southern Utah. This vessel, when found, was filled with corn. This form of urn is frequently met with among the ruins of this section, and a number of remarkably fine examples may be seen in the superb collection of the National Museum. In some instances the impressed designs have been produced by the application of textile fabrics or the use of shells, stones, and sticks. Rarely the coiling method was employed in the manufacture of vessels of more elaborate form, as in a remarkable water-



12.—CORRUGATED WATER-JAR, NEW MEXICO.
JAMES TERRY COLLECTION.

bottle from New Mexico, in the Terry collection. This is in the form of an animal, possibly intended to represent the Rocky Mountain sheep or the antelope.

The red painted variety is made of a gray clay, considerably harder and more thoroughly burned than the coiled ware, and covered with a coating of dark red coloring matter. The

surface is usually glossy, the result, probably, of burnishing with smooth pebbles. Geometrical devices are frequently painted on the surface in black.

The third variety, which is by far the most abundant, is made of a finer clay, mixed with pounded shells, quartz, or flint. In color the body is a light gray-white, sometimes almost approaching in quality and appearance the yellow or Rockingham body of the civilized potter. This

is greatly superior to any other ware produced by native tribes in the United States. It is generally covered with a fine white wash or slip, polished by burnishing, and decorated with geometrical figures applied in black, red, and buff. The colored designs, while crude, were sometimes wonderfully well executed. The vessels of the ancient Pueblos excelled the productions of all other aboriginal peoples in the United States in the variety of shapes. Mugs, pitchers, jars, urns, dippers, bottles, and bowls formed but a small portion of the fictile products of this section. Illustration 13 will convey an excellent idea of the older wares of this class. The original, which measures six or seven inches in height, was found in the ruins of the Cañon de Chelly, Arizona. The form is crude, the outlines irregular, and the decoration poorly executed in black. From this same site, however, the writer, some years ago, in connection with Mr. William H. Jackson, photographer of the United States Geological Survey, unearthed a number of fine specimens of similar ware, of superior workmanship.

A form which is frequently met with in the San Juan valley is the mug with double handle, as shown in Illustration 14. In this example, which comes from the vicinity of Provo, Utah, the design is more carefully drawn.

A very interesting discovery was made during the winter of 1891 and 1892 by Mr. Charles McLoyd, of Duran-



13.—ARCHAIC PUEBLO JUG,
ARIZONA.

go, Colorado, who spent six months exploring the cañons of the San Juan and Colorado rivers. In a dry cave in Southern Utah he found a large coiled vase, covered with a flat stone, which contained a number of perfect pieces of earthenware undecorated and *unburned*. One of these specimens is now before me. It is a double-handled cup, three and a quarter inches in height, of a buff-colored clay, hardened by the heat of the sun.

Being in an unfinished condition, these examples will throw considerable light upon the methods of manufacture as practised by this ancient race. The presence of so many entire vessels in one place is evidence that they were stored away for future burning, and afterwards forgotten.



14.—DOUBLE-HANDED MUG, UTAH.

A water jar from the Cañon de Chelly, about ten inches in diameter (Ill. 15), is decorated in white and black. The body of the vessel is covered with a series of diagonal lines, between which the meander, or "walls of Troy" design forms the embellishment.

A large olla, or jar, from the ancient province of Tusayan, Arizona, exhibits a different style of ornamentation, which consists of white figures on a black painted ground. This interesting piece is in the collection of Mr. T. V. Keam. The form of this specimen is somewhat unusual



15.—ANCIENT WATER-JAR, ARIZONA.



16.—ANCIENT POTTERY OLLA, ARIZONA.



17.—ANCIENT PUEBLO BOWL, ST. GEORGE, UTAH.

in this section, and belongs to the type represented by the steatite ollas, which have been found so abundantly in California, where pottery was made to a very limited extent by the former inhabitants, and only of the very rudest character (Ill. 16).

An example of the best ware made by the ancient Pueblos is shown in Illustration 17. It is a bowl or basin, of symmetrical shape, made of the grayish-white body, with polished and painted interior, from an ancient tumulus, near St. George, Utah. The design is regular and wonderfully well executed.

A common form of pottery found among the remains of this interesting people is the dipper, or ladle-shaped vessel, which was extensively used for filling the water jars, and may have been employed as a drinking-cup. These were provided with straight handles, which were usually decorated in colors, and sometimes provided with a perforation at the end for suspension. The interior of the bowl generally received decorative treatment also,

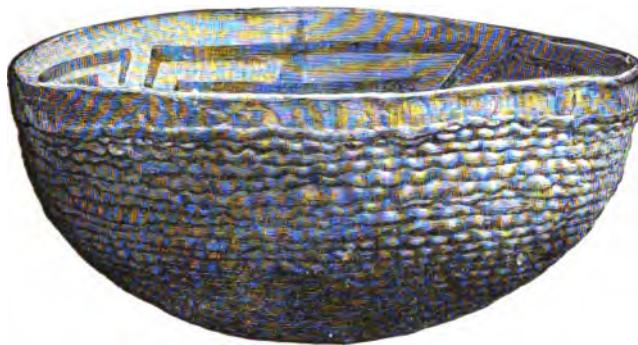


18.—POTTERY DIPPER, MONTEZUMA
CAÑON, UTAH.

and in many instances the painted designs are most elaborate and ornamental. The specimen represented in Illustration 18 was found in Montezuma Cañon, Utah.

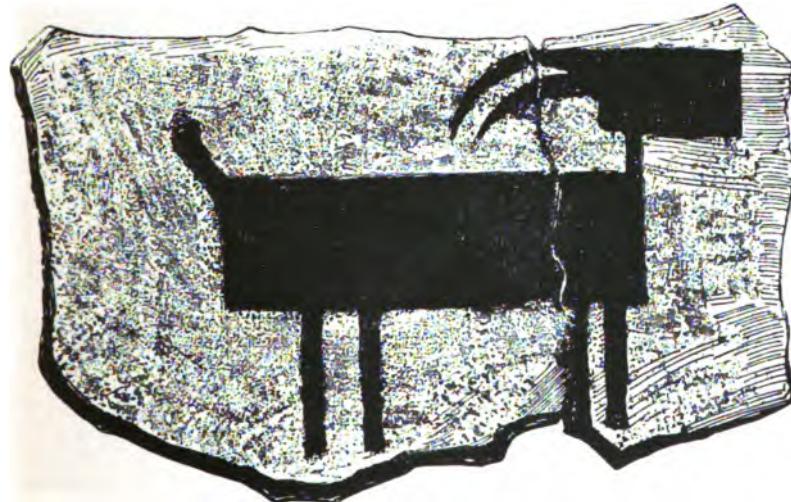
Some of these utensils possessed hollow handles, such as are in use at the present day by the Moqui Indians of Arizona, the purpose being to permit the water to be emptied from the bowl through the hollow tube in filling water jars.

Occasionally pieces are met with which combine the principles of coiling and painting. A bowl, of archaic



19.—COILED AND PAINTED BOWL, CIBOLA.

form, from Cibola, shows a corrugated or coiled exterior surface, with the usual thumb indentations, and a polished white interior, with geometrical designs in black (Ill. 19).

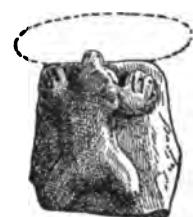


20.—FRAGMENT OF ANCIENT PUEBLO POTTERY. PAINTING OF ANTELOPE.

The painting of animal figures was sometimes attempted by the ancient potters, though examples of this style are comparatively rare. A curious illustration of this class of ware is a fragment, with conventional painting of antelope, picked up by the writer in the ruin district of the Rio San Juan (Ill. 20).

In rare instances pieces have been discovered which possess moulded figures of reptiles and other subjects, as in the fragment of the neck of a vessel, on which is a modelled representation of a frog, which I discovered in

Southwestern Colorado, now deposited in the collection of the Academy of Natural Sciences, Philadelphia (Ill. 21).



21.—MOULDED
FROG ORNAMENT.

The modern house-building Indians of Arizona and New Mexico continue to make pottery after the ancient methods. The ware, while inferior in body, is more elaborate in design and considerably richer in forms and variety of embellishment. Animal representations, both moulded and painted, are the rule rather than the exception. A most characteristic form of vessel which is common to the Moquis, Pueblos, and Zuñis, is the meal jar, decorated with black, red, and buff paintings of deer, elk, and birds, on a white ground. The annexed engraving (Ill. 22) shows a representative example of this type, from Zuñi, with figures of deer and birds, surrounded with decorative designs. In depicting the former, the mouth is almost invariably connected by a passage extending to the stomach (?).

Water bottles in the forms of birds, beasts, and reptiles, and in imitation of the human form, are made in

great profusion by the Zuñi potters. An effigy bottle, representing a mother owl with three little ones perched on her back, is a characteristic representative of this class (Ill. 23). The owl seems to have been a favorite subject



22.—MODERN ZUÑI MEAL JAR.



23.—ZUÑI INDIAN WATER VESSEL.



24.—ZUÑI COILED JAR.

with the native designer. The deer, elk, and bear were also represented, and among the more recent productions the domestic fowl, cow, and hog figure largely.

The modern Zuñis also practise the coiling method to some extent in making their pottery, as may be seen in Illustration 24, which shows a jar or pot with corrugated surface and serpent-like, relief ornaments on opposite sides.



25.—MODERN PUEBLO WATER VESSEL,
COCHITI, N. M.

The Indians of Cochiti, as in all of the nineteen Pueblo villages of New Mexico, manufacture ware of a similar character. A water vessel, here figured (Ill. 25), in form of a bird, with painting representing a hunting scene, is an average production of the present day.

It will be seen by a study of the foregoing illustrations that the artistic instinct was strongly developed in the village Indians of the Southwest. The simplicity of decoration, as shown in the tasteful combinations and variations of the fret and scroll, the triangle, and other elementary designs, the presence of a semi-glazed or polished surface, and their utilitarian forms entitle these productions to the highest place among the fictile manu-

factures of American races. Such results could only have been reached by the intelligent and well-directed efforts of a sedentary people, who had for centuries remained in one place and had attained a high degree of proficiency in the useful arts.

We are indebted to the Bureau of Ethnology for the majority of the illustrations of Pacific Slope pottery used in this chapter.





CHAPTER IV.

EARLY BRICK- AND TILE-MAKING.

THE belief that all of the bricks which were used in the construction of houses in this country previous to the middle of the eighteenth century were imported from Europe is widespread but erroneous. It is true that bricks were brought from Holland to New York in the seventeenth century, and some of the ancient buildings in the New England States and Pennsylvania were built of bricks procured from Great Britain, yet it is equally certain that brick-making had become an established industry in America a few years after the arrival of the first white settlers. It is stated by Dr. J. Leander Bishop, in his *History of American Manufactures*, that bricks were burned in Virginia as early as the year 1612, and so rapid was the development of this art that "tyle-makers" in this new Colony were living well by their trade in 1649. Two years previous to the latter date, brick- and tile-making were being carried on in New England as independent callings. Daniel Pegg and others manufactured bricks in Philadelphia in 1685, and, shortly after, numerous brickyards were in operation along the shores of the Delaware. Many residences throughout the coun-

try, particularly in certain sections of Pennsylvania, were built of brick early in the eighteenth century. The cost of importing these supplies from England and transporting them to the rural districts, far removed from tide-water, would have been prohibitory. That building-bricks were extensively manufactured here previous to 1753 is indicated by a statement of Lewis Evans, of Philadelphia, who wrote to a friend in England in that year: "The greatest vein of Clay for Bricks and Pottery, begins near Trenton Falls, and extends a mile or two in Breadth on the Pennsylvania side of the River to Christine; then it crosses the River and goes by Salem. *The whole world cannot afford better bricks than our town is built of.* Nor is the Lime which is mostly brought from White Marsh inferior to that wherewith the old castles in Britain were formerly built."

When burned, as formerly, in "clamps," the bricks formed their own kiln, piled on edge, a finger's breadth apart, to allow the heat to circulate between. Those which came in direct contact with the wood-fire in the kiln were blackened and partially vitrified on the exposed ends; while the opposite extremities, which were farthest from the heat, were only partially baked, and consequently too soft for external use. The bricks which were uniformly surrounded by heat came out red. To utilize all of the bricks produced, the black ends of the former were laid outward in the wall, thus combining utility with ornamentation. Many of the older buildings were constructed in this manner, the black binders and red stretchers alternating, each layer breaking joints with that immediately

above and below. This method of laying bricks was the most common in use and was known as the Flemish bond.

The first roofing tiles used in America were in all probability brought from Holland. Peter Jagou built three houses on the Burlington Islands in the Delaware River, about 1668, of brick and tile. In 1670 he was plundered by the Indians and his dwelling was destroyed. Among the ruins of one of these structures Dr. Charles C. Abbott discovered, in November, 1891, some red and yellow bricks and examples of curled or "pan" tiles which were apparently of Dutch workmanship, though Prof. Edward S. Morse, who has devoted much time to the study of the roofing tiles of the world, has suggested to me that as there is no evidence that these were imported, they may have been made in this country. In his instructive article on Roofing Tiles, published in *The American Architect and Building News*, of April 23, 1892, Prof. Morse, referring to the flat roofing tile which has been found extensively in Eastern Pennsylvania, makes use of the following statement: "As the form of this tile and its dimensions correspond to the average flat tile seen in Germany, it is almost certain that the tile was introduced by the early German emigrants to that region."

Flat terra-cotta roofing tiles were made to a considerable extent in certain parts of this country, particularly in the German settlements of Eastern Pennsylvania, early in the last century, and were commonly used on smith-shops and out-buildings, but rarely on dwellings. The art was brought from Germany, where the same methods of manufacture are, to some extent, still practised. In this con-

nection the statements furnished by Prof. Morse possess considerable interest. He says: "The making of flat tiles, as I saw it near Wurtzburg, was of the simplest description. An iron frame having the outline of the tile to be made was the only important implement involved in the process. This frame represented the mould. The table upon which this rested consisted of a thick piece of



26.—PENNSYLVANIA ROOFING TILES (EIGHTEENTH CENTURY).

plank, over which was spread a piece of woolen cloth, one edge of which was nailed to the lateral edge of the plank, while the opposite edge of the cloth had secured to it an iron rod, the weight of which kept the cloth drawn smoothly over the plank. The iron frame was now placed upon the cloth and clay was packed into it with the hands, and then pounded down with a wooden mallet such as a moulder might use. A straight-edge was used to scrape

away the superfluous clay, a little mass being left at the head of the tile which was afterwards shaped into the nib which was to hold the tiles to the laths or battens. This being done, a square piece of board notched at one end to admit the nib was placed on the frame. The workman then grasped the iron rod attached to the free end of the cloth, and with the other hand holding the board in its place, lifted the cloth and inverted the whole thing, transferring the soft tile to the board. The iron frame was then removed, and the board with its unbaked tile was placed in the sun to dry." Such was substantially the method resorted to by the early tile-makers in this country, with the difference that rain grooves were added to the upper surface of the tile by the finger of the workman before the clay had dried. The grooving, however, was not always accomplished in this primitive manner. Mr. Solomon Grimly of Schwenkville, Pa., informs me that his grandfather, in describing the process employed by the Montgomery County (Pa.) tilers in the early part of the eighteenth century, stated that the frame or mould in which the tile was formed was grooved in the bottom and into this the clay was pressed and the superfluous material was cut away by passing a strong thread or wire across the top, a lump being left at the upper margin which was drawn up with the fingers to form the catch or knob. The uniformity of grooving which is sometimes noticed in tiles from the same source would seem to prove this statement to be correct.

The knob was not always, however, formed in this manner, as examples have been found in other localities

which show conclusively that the protuberance had been made separately, and afterwards attached to the tile. Mr. Grimly has sent me a specimen of this character, which he attributes to one Hiester (or Hüster), who is said to have made tiles in Upper Salford township, Montgomery Co., Pa., about 1735.

At Bethlehem, Pa., the Moravians made similar tiles about 1740, or earlier, until well into the present century. Mr. Robert Rau, of Bethlehem, has presented me with some interesting examples taken from an old building which was erected about 1760. At many small potteries in Lancaster County, Pa., roofing tiles have been made for upwards of a hundred and twenty-five years, and on an old smithy near the village of Bird-in-Hand one of the tiles which covered the roof bears the date 1769, which covers the entire surface, having been traced in the moist clay by the finger of the workman. Such tiles have been found in the *débris* of an old smith-shop, which was built in 1799, at Cope's Bridge, on the Brandywine, near West Chester, Pa., which, while probably made by an English Quaker, are of the usual German form. Throughout the greater portion of Eastern Pennsylvania the flat tile is found. The writer possesses specimens from many localities, which vary slightly in size and style of grooving in the productions of different potteries. They measure thirteen to fourteen inches in length, six and a half to seven in width, and five eighths of an inch in thickness, and are broadly and shallowly grooved, for the purpose of allowing the rain to flow off, with a knob or hook at the upper margin of the under side for attachment. Mr. Jacob Swope, of Bird-in-

Hand, was making tiles in 1820, and in Bucks County, Pa., they were manufactured, of finer clay and somewhat smaller size, as late as 1850. In the German settlements of Pennsylvania, tiles from the old buildings are still in demand for lining baking-ovens, as they are considered superior for this purpose to fire-bricks, on account of their thorough burning.





CHAPTER V.

EARLY POTTING IN AMERICA.

THE potter's art was probably first practised in this country by the earlier emigrants in Virginia. Numerous small potteries sprung up to supply the modest needs of the simple-minded inhabitants, which furnished coarse earthenware utensils for culinary and other purposes. While such crude wares were made to a considerable extent, no record of any one of the primitive kilns, which were insignificant affairs, has descended to us. The older chroniclers seem to have completely ignored, as unworthy of note, the existence of an art in their midst which had already become familiar to them before leaving their native soil. Previous to 1649 there were a number of small potters in Virginia who carried on a thriving business in the communities in which they operated; and the first Dutch settlers in New York brought with them a practical knowledge of potting, and are said to have made a ware equal in quality to that produced in the ancient town of Delft,—hardly a white ware, but such as could be produced from the natural clays which abounded in the country. Prof. Isaac Broome, of the Beaver Falls Art Tile Works, informs me that the remains of an old kiln

fire-hole, saved from the ravages of time by being thoroughly vitrified, still exist a mile or two below South Amboy, N. J., supposed to be a relic of the earlier pottery ware made on this continent, and most probably built by the Dutch to make stew-pans and pots.

Among the immigrants of the seventeenth century were pot-makers, who had learned their trade in the mother-country, and Gabriel Thomas, who came from England, states in his *Description of Philadelphia*, published in 1697, that "great encouragements are given to tradesmen and others. . . . Potters have sixteen pence for an earthen pot which may be bought in England for fourpence."

Gilbert Cope, of West Chester, Pa., has discovered in his genealogical researches that one Joshua Tittery, from Newcastle-upon-Tyne, came over to Pennsylvania in the year 1683, in the employ of the "Society of Traders," as a glass-maker, and in his will he calls himself a *potter*. As early as about 1690 Philadelphia had at least one potter and one tobacco-pipe maker.

FIRST WHITE-WARE MANUFACTORY IN AMERICA.

Dr. Daniel Coxe, of London, one of the Proprietors, and afterward Governor of West New Jersey, was probably the first to make white ware in the Colonies. While he did not come to America himself, he caused a pottery to be erected at Burlington, N. J., previous to the year 1685, through his agent, John Tatham, who, with Daniel Coxe, his son, looked after his large interests here. We are indebted to Mr. John D. McCormick, of Trenton, for

calling attention to the following reference to this pottery, in the inventory of property offered for sale in the Jerseys, supposed to have been written about 1688, in the Rawlinson manuscripts, in the Bodleian Library, at Oxford, England, which has been carefully transcribed from the original and forwarded to me by the obliging librarian :

" I have erected a pottery att Burlington for white and chiney ware, a greate quantity to ye value of 1200 li have been already made and vended in ye Country, neighbour Colonies and ye Islands of Barbadoes and Jamaica where they are in great request. I have two houses and kills with all necessary implements, diverse workemen, and other servants. Have expended thereon about 2000 li." ¹

In the same MS., fol. 46, are " Proposalls made by Daniell Coxe proprietary and Governor of ye provinces of East and West Jersey in America :

" The above mentioned Daniell Coxe being resolved to sell his interest in Land and Government of the Colonies of East and West Jersey. The land amounting . . . unto one million of Acres (etc).

" Itt is believed a thousand pounds per Annum cleere of all charges the said Daniell Coxe hath likewise at Burlington two houses and kill with all necessary materialls and implements with diverse servants who have made a greate progresse in a Pottery of White and China ware above 1200 li worth being already made and vended in the Country neighbour plantations and the Islands of Barbados Jamaica &c. and well managed will probably bee very

¹ MS. Rawlinson, c. 128, fol. 39 b.

Advantagious to ye undertakers D : C: haveing expended thereon to bring it to perfeccion allmost 2000 li."

It is recorded that in 1691 Dr. Coxe sold to the "West New Jersey Society" of London, consisting of forty-eight persons, his entire interests in the Province, including a dwelling-house and "pottery-house" with all the tools, for the sum of £9,000 sterling.

John Tatham bought of Dr. Coxe, in 1689, fourteen acres of land in Burlington. In 1690 he was elected Governor of East and West New Jersey, and subsequently erected in Burlington a "great and stately palace."

It is possible to gain some idea of the nature of this "white and chiney ware" by examining the statements of Dr. Plot, a contemporary, who published his *Natural History of Staffordshire* in 1686, as quoted by the late Mr. Llewellynn Jewitt, in his *Ceramic Art of Great Britain*: "The greatest pottery they have in this county is carried on at Burslem, near Newcastle-under-Lyme, where for making their different sorts of pots they have as many different sorts of clay . . . and are distinguish't by their colours and uses as followeth:—

" 1. *Bottle clay*, of a bright whitish streaked yellow colour.

" 2. *Hard fire-clay*, of a duller whitish colour, and fully intersperst with a dark yellow, which they use for their *black wares*, being mixt with the

" 3. *Red Blending clay*, which is of a dirty red colour.

" 4. *White clay*, so called it seems, though of a bleuish colour, and used for making yellow-color'd ware, because *yellow is the lightest colour they make any ware of.*"¹

¹ Page 97, vol. i., London, 1878.

In 1685 Thomas Miles made a white "stoneware" of pipe-clay procured at Shelton. A few years after this, it is said that a potter named Astbury made "crouch" and "white stone" ware in the same town, on which he used a salt glaze.¹ It is probable that the "chiney" of the Burlington pottery was in reality a cream-colored ware or a white stoneware somewhat similar to that made about the same time in England. It is not unlikely that the clay was brought from South Amboy, as Dr. Coxe owned considerable land in that vicinity. This clay has since been extensively employed in the manufacture of fine stone-ware.

Mr. Francis B. Lee, son of the Clerk of the Supreme Court of New Jersey, has recently discovered the pleadings in a case apparently relating to the old Burlington Pottery, to which my attention has been called by William Nelson, Esq., corresponding secretary of the New Jersey Historical Society, as published in the *American Potters' Journal* of April 1, 1892. This reference seems to establish the fact that this pottery was in operation at least as early as 1685. In examining a court book in and for Burlington jurisdiction, Mr. Lee found, in the records of a Court of Sessions (12 m. 20-22 days, 1685), a suit brought by James Budd against Edward Randall ("Acc' on debt"), reported as follows :

"The deed or Indenture of agreem't betwenee Plain't & def't Read & proved, & also ye bond of Two Hundred pounds from ye def't to ye Plain't for p'formance, also read and proved.

¹ This was made of tobacco-pipe clay mixed with flint, and was superior to anything produced in England before.

“ Mary Budd Attested sayth that shee being at London before ye Def’t came away shee was told by an honest woman there who had some concerne amongst ye Potters at London that she feared ye Pott works here would come to nothing, for that the said def’t Randall & ye other p’sons who were to come to manage ye same works had not skill to p’fect it.

“ Wm. Winn Attested sayth that hee can finde noe Clay in the Countrey that will make white ware; And further sayth that Edward Randall, the def’t, is as good a workman as James Budd ye plaint can finde in England.

“ The Jury bring in this determination (vizt.) wee can give noe fynall determination of ye matter until materialls requisite shall come from England to prove ye skill of ye def’t.

“ Whereupon the Bench order that the said Edward Randall recinde ye Concerne of ye said James Budd until fitt materialls be sent for from such place in England as ye said Edward Randall shall appoint.”

From this it would appear that Randall, who was brought to America by James Budd to manage the Burlington works, was, for some reason, either because of lack of skill or the impossibility of procuring suitable clay, unable to fulfil his contract to manufacture white ware up to that time. Later, as Dr. Coxe states, a great quantity of the ware was successfully manufactured here.

The exact location of the old Coxe pottery is not known. It was probably situated somewhere between Burlington and Trenton, not necessarily in the former town, but somewhere in the county.



CHAPTER VI.

POTTERIES OF THE EIGHTEENTH CENTURY.

EARLY OPERATIONS IN THE CAROLINAS.

ACCORDING to tradition, china clays were sent to Europe from North Carolina more than two centuries ago. The Indians are said to have carried it from the Smoky Mountains to the coast, "under the name of Unakah," as Mr. W. A. H. Schreiber of Webster, N. C., informs me, which was "their name for Smokies (meaning white), still called Unaka in Mitchell Co. and Unakoi in Cherokee."

Previous to the middle of the last century, and before the manufacture of porcelain had been attempted in America, English potters were using china clays procured in this country. Mr. Llewellynn Jewitt, in his *Ceramic Art of Great Britain*, informs us that a patent was taken out in 1744, by Edward Heylyn, of the parish of Bow, in the county of Middlesex, merchant, and Thomas Frye, of the parish of West Ham, in the county of Essex, painter, for the manufacture of china-ware; and in the following year they enrolled their specification, in which they state that the material used in their invention "is an earth, the produce of the Chirokee nation in America, called by the

natives *unaker*." In 1878 and 1879, Mr. William Henry Goss, proprietor of the extensive porcelain works at London Road, Stoke-on-Trent, contributed to the English *Pottery and Glass Trades' Review* a series of notes on Mr. Jewitt's work. In December of the former year he wrote : "The specification of this patent is of startling interest. Who would have thought, until Mr. Jewitt unfolded this document to modern light, that the first English china that we have any knowledge of was made from American china-clay ? Let our American cousins look out for, and treasure up lovingly, specimens of the earliest old Bow-ware after learning that."¹ Then follows the specification in full, as given by Mr. Jewitt, and Mr. Goss continues : "This 'unaker,' the produce of the Cherokee nation in America, is decomposed granitic rock, the earth or clay resulting from the washing being the decomposed felspar of that rock. It is curious that it should have been imported from among the Cherokees when we had mountains of it so near as Cornwall ; unknown, however, to any 'whom it might concern ' until Cookworthy discovered it twenty-four years later than the date of the above patent." William Cookworthy was acquainted with American clays as early as 1745, for in a letter to a friend, dated fifth month, thirti-

¹ It may be interesting to note that John Dwight, in 1671, took out a patent for the manufacture of "porcelaine" or transparent earthen-ware, and Mr. Jewitt remarks : "To Dwight, therefore, it will be seen by these patents, the credit of being the first inventor and maker of porcelain in England belongs. His name is thus one entitled to lasting honour as the pioneer of one of the best, most beautiful, most successful, and most flourishing arts ever practised in our kingdom."

Mr. Charles Cooper, in an article, published in the *Gentleman's Magazine* of August 1892, states that John Dwight's patent for the manufacture of porcelain was dated April 23, 1671, and informs us that the old Dwight pottery is still in operation in Church St., Fulham.

eth, of that year, quoted by Mr. Jewitt, he writes : "I had lately with me the person who hath discovered the china-earth. He had samples of the china-ware of their making with him, which were, I think, equal to the Asiatic. 'T was found in the back of Virginia, where he was in quest of mines ; and having read Du Halde, discovered both the petunse and kaulin. 'T is the latter earth, he says, is the essential thing towards the success of the manufacture. He is gone for a cargo of it, having bought the whole country of the Indians where it rises. They can import it for £13 per ton, and by that means afford their china as cheap as common stoneware. But they intend only to go about 30 per cent. under the company."

We must not conclude from this statement that the ware which Cookworthy had seen had been made in America. It is much more probable that the pieces were some of those produced at the Bow works, within the year that had just passed, from the recently discovered American materials.

In 1765 and 1766 South Carolina clays were sent to the Worcester china works, and the Bristol works, for trial, but the results were not satisfactory.

Miss Eliza Meteyard informs us, in her *Life of Josiah Wedgwood*, that "as early as 1766, a Mr. Bartlem, a Staffordshire potter, who had been unsuccessful in his own country, emigrated to South Carolina, and commencing his trade there, induced various workmen to follow him."¹ In a letter to Sir William Meredith, Wedgwood thus expresses his alarm at this circumstance : "The bulk of

¹ See vol. ii., p. 475.

our particular manufactures are, you know, exported to foreign markets, for our home consumption is very trifling in comparison, to what is sent abroad ; & the principal of these markets are the Continent & Islands of North America. To the Continent we send an amazing quantity of white stoneware & some of the finer kinds, but for the Islands we cannot make anything to rich and costly. This trade to our Colonies we are apprehensive of losing in a few years, as they have set on foot some Pottworks there already, and have at this time an agent amongst us hiring a number of our hands for establishing new Pottworks in South Carolina ; having got one of our insolvent Master Potters there to conduct them. They have every material there, equal if not superior to our own, for carrying on that manufacture ; and as the necessities of life, and consequently the price of labour amongst us are daily advancing, it is highly probable that more will follow them, and join their brother artists and manufacturers of every Class, who are from all quarters taking a rapid flight indeed the same way ! Whether this can be remedied is out of our sphere to know, but we cannot help apprehending such consequences from these emigrations as make us very uneasy for our trade and Posterity."¹ The apprehensions of the great potter seem to have been groundless, as the early venture to which reference is made proved abortive and "disaster and death were the results." In the same year, however, Wedgwood procured samples of the Carolina clays, from the country of the Cherokees, some 300 miles from Charleston, which,

¹ *Ibid.*, vol. i., p. 367.

proving satisfactory after trial, were for several years after used by him in larger quantities. Subsequently he imported clays from Florida, which he seems to have preferred to the former.¹

Mines of fine kaolin are now being worked in Jackson County, N. C., which furnish clay for the best china made at Trenton, N. J., and East Liverpool, Ohio. This kaolin contains some oxide of cobalt which imparts to the ware a bluish tint, so desirable in fine porcelain bodies.

MANUFACTURE OF STONEWARE.

A stoneware factory was started in New York, at "Potter's Hill," near the "Fresh-water Pond," back of the old City Hall, in or about 1735, by John Remmey, who came from Germany. On an old map of New York City, printed in 1813, entitled, "A Plan of the City and Environs of New York as they were in the years 1742, 1743, and 1744, Drawn by D—— G—— in the 76th year of his age, who had at this time a perfect and correct recollection of every part of the same," Remmey & Crolius' pottery is marked. John Remmey died in 1762, but the business passed through three generations of Remmeys, all of the name of John, and was discontinued about 1820. Later on, Joseph Henry Remmey, a great-grandson of the founder, moved to South Amboy, N. J., with some of the machinery of the old factory, and established a pottery there. His father, John Remmey the third, owned one of

¹ Richard Champion, of the Bristol Porcelain works, arrived in South Carolina Dec. 6, 1784, and settled at Camden, S. C., as a planter. He did not, however, engage in the manufacture of pottery or porcelain in this country. See *Two Centuries of Ceramic Art in Bristol*, by Hugh Owen, 1873.

the largest libraries in New York in his day, and possessing literary tastes, wrote and published, in 1799, *Egypt as It Is*, and contributed numerous editorials to the newspapers of that period. These facts have been furnished me by Mr. John F. Remmey of Brooklyn, a son of Joseph

Henry Remmey, from records in his possession.

About 1810, Henry Remmey, a brother of John Remmey the third, and grandson of the original John Remmey, went to Philadelphia and soon afterwards embarked in the stoneware business, which has been continued to the present time, the proprietor of the works now being Mr. Richard C. Remmey, one of his great-grandsons. The Philadelphia works have grown to extensive proportions, ten large kilns being now in use. Here are manufac-



27.—STONEWARE MONEY-BANK,
R. C. REMMEY.

tured chemical bricks of superior quality and stone and porcelain-ware of every description, for chemical purposes, some of the vessels having a capacity of two hundred to five hundred gallons. These productions have obtained almost

a world-wide reputation for hardness and durability. Mr. Remmey is now making preparations for the manufacture of porcelain bath-tubs and other large designs. Much of the clay used at these works is obtained at Woodbridge, N. J. In addition to these specialties, the factory produces an extensive line of salt-glazed household utensils, such as mugs, pitchers, spittoons, jugs, crocks, and money-banks. The decoration is such as is usually found on similar wares;—cobalt blue designs beneath the glaze,—in addition to which a more artistic style of ornamentation is employed to some extent, consisting of incised devices touched with blue. The quality of these various products is unsurpassed and the large quantity of goods manufactured here places this factory in the front rank of such establishments in this country and abroad.

SLIP-DECORATED AND SGRAFFIATO WARE.

Perhaps there are no products of the potter's art more interesting to the antiquary and the collector than the rude "slip-decorated" pieces which were made in England and Germany during the seventeenth and eighteenth centuries. Among the most prominent of the earlier British slip-potters were Thomas and Ralph Toft, who, with others of less renown, have left some of these primitive productions, in the forms of dishes, drinking-cups, candlesticks, and miniature cradles, which are now eagerly sought by collectors, fine examples of which may be seen in the Museum of Practical Geology and the South Kensington and British Museums of London, as well as in a

number of private cabinets in England.¹ The decoration consists of childish designs, representing royal personages, lions, unicorns, birds, beasts, and flowers, executed by tracing liquid clays, or "slips," of different colors, on common red or buff pottery, through a quill attached to a hand-box, the flow of the diluted clay being controlled by means of a small air-hole in the upper part of the slip-box, which was closed or opened by the thumb of the decorator. By this contrivance a variety of ornamental effects was produced, such as the outlining of figures, the application of dotted or trellised borders, inscriptions, and dates.

The recent discovery by the writer of slip-decorated pottery, and of *sgraffiato*, or incised red ware, among the products of old American potteries, possesses considerable interest. This latter style of ornamentation was common with Italian potters so long ago as the fifteenth century, and in Germany and England was employed to some extent two hundred years later. The decorative process consisted in covering the earthenware biscuit with a thin layer of lighter-colored slip, through which the designs were scratched with a style to expose the darker color below. A coating of transparent glaze, slightly clouded with green and yellow oxides, was then applied to the surface, and, after the final firing, the ware presented the appearance of a rich red intaglio beneath a greenish or mottled-yellow ground. During the latter half of the last century and the first half of this, many small potteries were established throughout the German settlements in

¹ Those who desire to go further into the subject of British slip-decorated ware are referred to *Examples of Early English Pottery, Named, Dated, and Inscribed*, by John Eliot Hodgkin, F.S.A., and Edith Hodgkin. London, 1891.

Eastern Pennsylvania, particularly in the counties of Bucks, Montgomery, Lehigh, Berks, and Schuylkill, where such ware was produced quite extensively. Its very homeliness and crude, but picturesque, ornamentation appealed strongly to the simple-minded country folk who used it in their daily avocations. The sentiments embodied in the quaint inscriptions and mottoes, which usually formed a prominent part of the embellishment of earthen plates, dishes, and jars, and the frequent presence of dates of manufacture, which were usually very exact, including the day of the month, caused such pieces to be carefully treasured and handed down from mother to daughter.

Early specimens which have recently been discovered indicate such proficiency in slip-decoration as would lead us to infer that the art was by no means new to the potters of a century and a quarter ago in this country. The old English and German craftsmen plied their trades in this new field of labor on the same principles which had governed their ancestors a hundred years or more before.

The oldest dated example of this ware which has yet come to light in the United States is a dish, fifteen inches in diameter and three inches deep, now in the Pennsylvania Museum, Philadelphia, which is embellished with floriated central devices, colored with red and green glazes, and the following inscription, carved in the white slip around the rim :

“ Not Be Ashamed I Advice thee Most
if one Learneth thee what Thou not Knowest,
the Ingenious is Accounted Brave,
but the Clumsey None Desire to have, 1762.”

This is evidently the work of a German potter, and was most probably made at one of the numerous old potteries in Montgomery County, Pa. (Ill. 28).

The exact origin of this interesting example is not known, though there is no doubt that it was made in



28.—SLIP-ENGRAVED DISH, PENNSYLVANIA, 1762. (BARBER COLL.)
PENNSYLVANIA MUSEUM.

Pennsylvania. Several potteries are known to have been in operation in Montgomery and Bucks counties at the time of the date of this piece, where such ware was made. Mr. James Terry, of New Haven, Ct., is in possession of

a brown, glazed earthenware tea-caddy, five inches square. The front is covered with yellow slip, which has been cut away to show some crude designs, by bringing out the dark color beneath, and the inscription :

" Esther Smith
Her Tea Cannister Sept
6th 1767."

There is reason to believe that this was made at the old Smith pottery in Wrightstown township, Bucks County, Pa., erected in 1763 by Joseph Smith, where such ware is known



29.—TEA-CADDY, SGRAFFIATO WARE. JAMES TERRY COLLECTION.

to have been produced. The owner of the pottery had a sister Esther, who was born in 1727, but as she was married to Thomas Lacey in 1748, this piece could not have belonged to her. But Joseph Smith (born 1721) was married in 1743, and it is quite likely that he may have had a daughter Esther, named after his sister, who was probably the original owner of the cannister, shown in Engraving 29.

Mr. Isaac Eyre, of Newtown, Pa., informs me that Thomas Paxson, of Buckingham, father of ex-Chief-Justice Paxson, of the Supreme Court of Pennsylvania, once told

him of an old dish that was made at the old Smith pottery, which contained the following legend:

“Here is health to the man who has a *half* Joe
And has the heart to lend it,
Let the dogs take him who has a *whole* Joe
And has n’t the heart to spend it.”

Dr. Lettie A. Smith of Newtown, granddaughter of Thomas Smith, who afterwards owned the pottery, remembers distinctly seeing some of her grandmother’s decorated dishes, which contained four or more lines of poetry and the name of Thomas Smith, with dates.

An earthen keg, covered with a black glaze, sixteen inches in height, with the name J. Smith and date 1799, is also believed to have come from the same pottery. It is in the possession of Mr. J. S. Williams of New Hope, Pa. The only examples remaining in the Smith family are an earthen bowl and a coffee-pot decorated with raised work, now owned by Dr. Lettie A. Smith.

Abraham or Isaac Stout, about 1775, made slip-decorated ware in Eastern Pennsylvania. A “vegetable dish,” a foot in diameter and two and a half inches deep, with conventional floriated pattern and the initials S. S. on the margin, is owned by Miss Laura Swartzlander of Yardley, Bucks Co., Pa. This was one piece of a dinner set made by Mr. Stout for his daughter, Salome, the great-grandmother of the present owner.

Christian Klinker, according to an old deed in possession of Mr. Wm. J. Buck of Jenkintown, Pa., was an

¹ A “Joe” was a gold coin in circulation many years ago.

"earthen potter maker," in 1792, near Bucksville, Bucks Co., and had resided there for at least five years previous to that date.

An interesting slip-dish in the Pennsylvania Museum, Philadelphia, remarkable for its unusual size, light weight, and perfect condition, is embellished with a conventional



30.—LARGE SLIP-DECORATED DISH, PENNSYLVANIA, 1769. PENNSYLVANIA MUSEUM COLLECTION.

design of tulips in white and green outlined with lavender, on an orange-colored ground. This superb specimen measures seventeen and a half inches in diameter and possesses a double band of inscriptions in low German, and the date 1769 (Ill. 30). This was made at one of the old potteries in Eastern Pennsylvania.

In the extensive ceramic collection of Mr. George H. Danner of Manheim, Pa., is a large slip-decorated earthen dish adorned with a figure of a bird, under which is a heart on which the following inscription occurs :

“This Dish
and Heart
shall never
Part, 1773.”

This was made at one of the local pot-works, probably at the old Smith pottery in Bucks County.

A curious old pottery dish, dated 1789, in possession of a German family in Montgomery County, is remarkable for having three bands around the rim, each an inch wide, on which are inscriptions and ornamental devices, the central portion of the dish being decorated with a rudely executed floral design. The outer band contains a circle of words, as follows :

“Mathalena Jungin, ihr Schüssel.
Die Schüssel ist von Erd gemacht
Wann sie ver bricht der Häffner lacht.
Darum nehmt sie in Acht.”

This, in English, would read :

“Mathalena Jungin, her dish.
The dish is made of earth
When it breaks the potter laughs.
Therefore take care of it.”

The second or middle band contains a wreath composed of ten flowers (tulips) and leaves.

In the inner band is the following inscription :

"Blumen Mollen ist gemein
Aber den geruch zugeben vermach zur Gott allein,"—

"To sketch flowers is for me, but to give perfume belongs to God alone."

This example is one of the few pieces which contain the names of the original owners. It is said to have been made at the old Cope pottery in Frederick township, Montgomery County.

A second example inscribed with the recipient's name has recently come to light. It is a well preserved plate, similarly ornamented, with an inscription incised in the back, which may be freely translated thus: "This dish was made for Miss Hos (Hause) German Township, Berks county, June 4th 1814, so much from me, Henry Stofflet." The family tradition is that this was made by Stofflet as a wedding present for the lady whose name appears on it. Whether the prospective bride resided in Berks County, or the pottery was located there, we are unable to determine. The dish is now in possession of Mr. James Terry of New Haven, Ct.

I am indebted to Mr. H. F. Shaddinger for the discovery of a two-handled puzzle mug, nine inches high, of light-red, glazed pottery, slightly streaked with brown (Ill. 31). On one side is scratched the American eagle beneath the glaze, with the word "Leberty" above. On the reverse are inscribed the initials P X K and "May 5the, 1809." On the bottom, scratched in the clay, occurs the inscription:

"Phillip Kline
his Muge
May 5the 1809."

The maker of this piece had a brickyard and pottery for common ware in Bucks County, in the year indicated. While this is not strictly an example of slip-decoration, it is a curious piece of incised pottery, made on the same principle as the puzzle mugs which have been produced in England for two hundred years.

In searching for examples of this curious ware, I have received much valuable assistance from Mr. Thomas B.

Deetz, whose explorations through the old farm-houses in my behalf have resulted in the discovery of many a rare old piece, whose existence would never have been suspected had not my attention been drawn to this untrodden field by an old pie plate which I procured from him, the first example of the



31.—TWO-HANDED PUZZLE MUG. (BARBER COLL.) PENNSYLVANIA MUSEUM.

kind that I had seen (see Ill. 34). His knowledge of Pennsylvania German, which is generally spoken in this section of the State, enabled him to penetrate the mysteries of ancient closets, and place at my command the hoarded treasures concealed therein.

One John Leidy, a German, made sgraffiato and slip-decorated wares a hundred years ago, near the present

village of Souderton, Montgomery County, Pa. That both varieties were manufactured at about the same time is clearly shown in two elaborately ornamented dishes, ascribed to him, which have been religiously preserved as



32.—GRAFFIATO DISH, MADE IN PENNSYLVANIA IN 1796, BY JOHN LEIDY.
(BARBER COLL.) PENNSYLVANIA MUSEUM.

heirlooms by the recent owner. These interesting pieces measure each fourteen inches in diameter. The first, which is two and a half inches deep, with flat bottom and sloping sides, is adorned with floral designs carved in the

yellowish slip and covered with a green mottled glaze, and bears on the margin the date, November 9, 1796, and the following inscription :

“ Wer etwas will verschwiegen haben
Der darf es seiner frau nicht sagen ” (Ill. 32).



33.—SLIP-DECORATED VEGETABLE DISH, MADE BY JOHN LEIDY, PENNSYLVANIA,
1797.

The second, two inches in depth, is traced with white, green, and dark blue slips, on a bright red body, in conventional devices, with bands of white around the margin. On the inclined rim is the following couplet :

"Lieber will ich ledig leben
Als der Frau die Hosen geben,"

and the date, October, 1797 (Ill. 33). The mutinous sentiment contained in both legends evinces an inclination on the part of the ancient artist to rebel against feminine domination.

Of especial interest, from the fact that it was the first piece to call my attention to the existence of slip ware in the United States, is an incised, red pie-dish, eleven inches in diameter, ornamented with birds, branches, and the following inscription extending around the margin and overlapping below :

"Fisch und Fögel ; gehören nicht den frowen Flögel ;
Aber Fögel Fisch, gehören den Herren auf den disch,"

with the date May 16, 1826, beneath what was intended to represent the American eagle (Ill. 34). A free translation of the above would be : " Fish and birds are too good for rough fellows and should only be served to gentlemen."

We are enabled to assign this piece to a particular maker through another example which has recently come to light. This latter, now in my possession, is of the same size and form, style of decoration, and, singularly, bears the same date, May 16, 1826. On the lower half is the American eagle, clutching an olive branch in each foot, but the upper design differs from that of the former in the substitution of flowers for the two birds. The inscription around the margin is as follows :

"Wer das lieben ungesund,
So dädens docter meiten,
Und wans den wibern weh däd ;
So dädens sie nicht leiten."

This may be translated thus :

"If love were unhealthy
Then the doctor would shun it,
And if it would pain the women
Then they would not suffer it."

The similarity of the workmanship and the formation of the letters in the two pieces, and, above all, the corresponding dates, prove them to be the work of the same hand.

The second piece bears on the back a name and date, which have been scratched in the clay before it was burned,—“Samuel Troxel Potter May the 16th 1826.”

Whether Troxel was the proprietor of the pottery or merely a

34.—GRAFFIATO DISH, PENNSYLVANIA, 1826.
(BARBER COLL.) PENNSYLVANIA MUSEUM.

workman employed there we are unable to determine, but it is certain that he made the two pieces described. These interesting specimens were probably part of a set made to fill a particular order. It is rather a remarkable coincidence that they should have been brought together



again, from widely separated localities, sixty-seven years after they were manufactured.

Early in the present century John Nase produced similar ware, at a pottery one-half mile west of the hamlet of Tyler's Port, Montgomery County, Pa., about four miles distant from Souderton, having, it is said, succeeded his father in the business. A dish in my possession bears the name Johannes Neesz (the father of John), and the date 1812, with the reverent words :

“Lieber Vatter im Himmel reich,
Was du mir gibst das es ich gleich.”



35.—SLIP PITCHER AND SUGAR-BOWL. MADE BY JOHN NASE ABOUT 1830. BARBER COLLECTION.

I have procured from some of his descendants a number of examples of the work of John Nase, who manufactured both slip and incised ware in plates, mugs, vegetable dishes, and other useful forms. One of these is a small pie-plate with sgraffiato decoration,—a leaping stag and spray of conventional flowers, Pennsylvania German inscription, and date, 1814. He also made pottery toys, such as small tubs and bird-shaped whistles. That he was a skilful potter is amply shown in some of his finer work. An elaborate sugar-bowl and small creamer with twisted

handle, which I have recently acquired from a reliable source, are decorated with dotted figures and festoons of yellow slip, and covered with a heavy, rich, dark-brown glaze which sparkles with an auriferous sheen akin to



36.—DEEP SLIP DISH. JOHN NASE, 1847. (BARKER COLL.)
PENNSYLVANIA MUSEUM.

goldstone. The bowl is mounted with a lid that is built up into a crown-shaped ornament by the coiling of thin ropes of clay into spirals and scrolls. In form the piece bears a remarkable resemblance to some of the early English posset-pots (Ill. 35).

A characteristic piece of slip-decoration from the Nase pottery is shown in Illustration 36. Black and white slips have been traced on the red body to form the figure of a bird surrounded with foliage, and the words :

"Ich koch was ich kan
Est mein sau net so est mein man,"—

"I cook what I can
Is my pig neat, so is my man."



37.—DULL-FINISHED SGRAFFIATO DISH. MADE BY JOHN NASE ABOUT 1847.

A peculiarity of some of the work of John Nase is the absence of glazing on some of the sgraffiato ware. These

pieces have the appearance of being covered with a thin glossy wash or varnish, an effect produced by smearing the inside of the saggers in which they were fired with glaze, which in the kiln would vaporize and form a slight deposit on the ware, technically known as "*smear*" glaze. A large pie-dish of this character has scratched upon it the figure of a mounted soldier, in Continental uniform, with trumpet and sabre (Ill. 37). Patches of green, blue,



38.—SGRAFFIATO PLATE. MADE BY FREDERICK HILDENBRAND ABOUT 1830.

and red glazes have been applied to the petals and leaves of the flowers, but the ground is dull-finished. This design seems to have been a favorite one at the Nase pottery, as several examples have recently come into my hands. In some instances the trumpet has been replaced by a tobacco-pipe in the right hand of the rider, as in a highly glazed specimen in the Pennsylvania Museum, Philadelphia, which bears the date 1847. A large pistol

is sometimes substituted for the sabre. It has been suggested that the mounted figure was intended to represent General Washington, but the inscriptions which are found on such pieces bear no allusion to the central design.

Frederick Hildenbrand was a contemporary of John Nase, and had a pottery two miles west of Tyler's Port.



39.—SGRAFFIATO PLATE. MADE BY JACOB SHOLL, MONTGOMERY COUNTY, PA., 1831.

Examples of his work are scarce, but one which has been carefully preserved by a daughter serves to show the character and quality of his productions. This is a dull-finished plate, eight and a half inches in diameter, ornamented with the figure of a lion, *passant*, picked through a coating of white slip. On the back the name of the

workman, Johanes Leman, is scratched in the paste. Leman is said to have worked at several of the potteries in the vicinity at different times (see Ill. 38).

Another pottery was in operation about a mile south of Tyler's Port, which was owned by one Jacob Sholl. He made incised ware of a good quality and considerable artistic merit. Some of his plaques were embellished with floral designs, with and without inscriptions, a number of them being dated 1831. An interesting plate from this pottery is shown in illustration 39. It is unglazed, save where patches of green have been applied to petals, and bears the above date. A large pie-dish from the Sholl pottery (Barber collection) contains the incised device of a large eagle which covers the entire surface. In each talon it grasps a spray of flowers, and in its beak it holds a scroll with the English inscription, "Liberty in the year 1832." The plumage is represented by numerous small curved incisions, revealing the red body beneath.

A pair of covered jars, in the possession of one of Sholl's descendants, are objects of considerable beauty and reveal the touch of an artist. Bold floral designs are engraved in the yellow slip which covers the surface, and the leaves and petals are tipped with green and blue pigments under the rich glazing. On the bottom of each a conventionalized flower is stamped in the paste (see chapter on Marks). These are the only examples of such ware which have come to my notice that bear factory marks. Michael Fillman was a potter at Sholl's establishment, and is said to have executed some of the best work produced there.

The following inscription is found both on a sgraffiato dish, dated 1831, and a spherical jar or flower-pot with floral designs, from the Sholl pottery :

“ Alles verfreszen und versoffen vor Meinem end
Macht ein richdig Testament ”—

“ Everything consumed in gluttony and drinking before my end, makes
a correct testament.”



40.—SGRAFFIATO JARS. MADE BY JACOB SHOLL, ABOUT 1830.

From the old pottery of Benjamin Berge, which was also situated in Montgomery County, the author has a pie-dish, thirteen inches in diameter, containing the figure of a bird, apparently a pigeon, standing on a branch, in the attitude of plucking its breast. Entirely around the border extends a curved spray of coarse flowers. This effective piece is decorated with yellow slip, but the design is not raised, as in the other examples figured, but beaten

or pressed into the red body, as is done at the present day in the common red kitchen earthen-ware, presenting a perfectly smooth surface (Ill. 41).

A coarse, red pottery, with rude floral slip designs in low relief, the raised parts covered with yellow, brown, and green glazes, was made by Michael and Andrew Headman, near Rich Hill, Bucks County, Pa., more than half a century ago. The business is still being carried on by

a son, Charles Headman, but I am informed that the manufacture of ornamental pottery has been discontinued. A flower-holder, a foot in height, which was made in 1849, is a characteristic example of the better class of ware manufactured here in former years (Ill. 42).

41.—SLIP DISH. MADE BY BENJAMIN BERGE,
ABOUT 1830. BARBER COLLECTION.



Many of the inscriptions which occur on the old slip-decorated wares of Pennsylvania were intended for ornament rather than the perpetuation of valuable precepts, while others were designed solely to amuse; hence we find among them some whose sentiments are more forcible than elegant. They were executed generally by illiterate German workmen, which fact will account for the introduction of misspelled words, which are often diffi-

cult of translation, even to those familiar with the Pennsylvania German dialect. The following will suffice to show the general character of these inscriptions:

On a large circular, slip-traced vegetable dish of the eighteenth century:

“Glück und unglück
ist alle morgen unser Frühstück”—

“Fortune and misfortune is every morning our breakfast.”



42.—POTTERY FLOWER-VASE. MADE BY CHARLES HEADMAN, 1849. (BARBER COLL.) PENNSYLVANIA MUSEUM.

On a deep dish, decorated with white and black slip designs on a red ground:

“An diesem disch gefalt mirs nicht
Der koch der wascht die fin(g)er nicht”—

“(To eat) on this dish it does not please me
The cook has not washed his fingers.”

The earlier potters of this section, bringing their art with them from the fatherland, employed tolerably correct German in these inscriptions, but their descendants in time drifted into the Pennsylvania German. There were English potters, however, among them, though pieces with English legends are scarce. The old potteries where inscribed ware was produced have entirely disappeared, and I have seen no pieces which were made later than the middle of the present century. The Pennsylvania Museum and School of Industrial Art, Philadelphia, possesses the largest collection of this ware extant.

TERRA-COTTA.

The terra-cotta works now operated by Messrs. A. H. Hews & Co., at North Cambridge, Mass., were started in Weston, Mass., previous to 1765, by Abraham Hews, great-grandfather of the present senior member of the firm. The ware manufactured at first consisted of household utensils, such as bean-pots, pudding and milk pans, jugs, etc., and the entry of transactions for one year was confined to a single page of the day-book. These products were usually sold in exchange for such commodities as molasses, New England rum, and other staple merchandise which formed the basis of barter in those days.

The clay used at Weston for some years was brought from Watertown, and at a more recent date from Cambridge, Mass.

During the first century of this pottery's existence, the firm name was changed several times, first to Abraham

Hews & Son, then to Abraham Hews & Sons, and later to Abraham Hews' Sons, three brothers of Abraham Hews second. In 1865 the present proprietor was admitted to partnership in the business, and five years later the establishment was moved to its present location, at which time the firm consisted of Messrs. A. H. & Horatio Hews. The latter soon after retired and the business was continued in the name of the former. Previous to the fire, which destroyed a portion of the works and all of the machinery, on December 1, 1891, it was claimed that this factory manufactured more hand and machine-made flower pots than any other establishment in the world. Large numbers of umbrella stands, *jardinières*, cuspidors, lamp-stands, garden vases, and other fancy earthenware were made from natural clays, a specialty in art pottery being reproductions of antique shapes, after Grecian, Roman, Etruscan, Phœnician, and Cypriote models, including creditable imitations of the productions of the Widow Ipsen of Copenhagen. In the plain biscuit state, for decorators,



43.—TERRA-COTTA JARDINIÈRE AND PEDESTAL. A. H. HEWS & CO.

such ware is known as Albert and Albertine, the latter differing from the former in the application of floral designs in high relief. Copies of old Peruvian vases have also been attempted, which included some of the double "whistling-jars" so well known to collectors of Incarial vessels. The most artistic and characteristic variety of terra-cotta made here, however, are the garden vases and pedestals of a rich, dark color which may be seen in the shop windows of almost any of our city florists. These are made of natural clays, without artificial coloring, and ornamented with classic designs in relief. The works have been rebuilt and are now running again, with improved facilities for supplying the ever growing demand for goods of this character, which the intelligent efforts and conscientious business methods of more than a century and a quarter have so abundantly merited.

As early as 1760, a pottery and glassworks had been established at Germantown, now a suburb of Quincy, Mass., through the exertions of Joseph C. Palmer and Richard Cranch, two progressive land owners, who were instrumental in establishing manufacturing enterprises of various kinds at that point. The late Mr. E. P. Cranch, of Cincinnati, Ohio, a grandson of the latter, left among his personal effects some fragments of pottery and glass which had been picked up by his father on the site of the old works. One of the pieces of pottery is three quarters of an inch in thickness, coarse in texture, and heavily glazed. Other examples are thinner, almost vitreous, and slightly iridescent, and were apparently never glazed, or but thinly. There seem to be no evidences of any sort of decoration.

FIRST CHINA WORKS IN PHILADELPHIA.

Not until 1769 was there any serious attempt made to manufacture fine china on this side of the Atlantic. In Watson's *Annals of Philadelphia*, we find the brief statement that "the desire to encourage domestic fabrics gave rise, in 1771, to the erection of a flint-glass manufactory near Lancaster, by which they hoped to save £30,000 to the province. A china factory, too, was also erected on Prime Street, near the present Navy Yard, intended to make china at a saving of £15,000."¹ In a foot-note the author adds: "This long row of wooden houses afterwards became famous as a sailors' brothel and riot-house on a large scale. The former frail ware proved an abortive scheme." The glassworks to which Mr. Watson refers were established at Manheim, Lancaster County, Pa., by Baron William Henry Stiegel, who came from Manheim in Germany. Examples of colored glass goblets and other pieces may be seen in the extensive collection of Mr. George H. Danner of that town. Mr. Charles Henry Hart, of Philadelphia, made the interesting discovery, a few years ago, of some old advertisements in the newspapers of the last century which throw considerable light on the early American china works, and he has kindly placed at my disposal the results of his researches. The first of these announcements, which appeared in the latter part of the year 1769, is as follows:

"NEW CHINA-WARE.—Notwithstanding the various difficulties and disadvantages, which usually attend the introduction of any important manufacture into a new country,

¹ *Vide*, vol. ii., p. 272.

the Proprietors of the China Works, now erecting in Southwark, have the pleasure to acquaint the public, they have proved to a certainty, that the clays of America are productive of as good Porcelain, as any heretofore manufactured at the famous factory in Bow, near London, and imported into the colonies and plantations, which they will engage to sell upon very reasonable terms ; and as they purpose going largely into this manufacture as soon as the works are completed, they request those persons who choose to favor them with commands, to be as early as possible, laying it down as a fixed principle, to take all orders in rotation, and execute the earliest first ; dealers will meet with the usual encouragement, and may be assured, that no goods under Thirty Pounds' worth, will be sold to private persons out of the factory, at a lower advance than from their shops. All workmen skilled in the different branches of throwing, turning, modelling, moulding, pressing, and painting, upon application to the Proprietors, may depend on encouragement suitable to their abilities ; and such parents, as are inclined to bind their children apprentices to either of these branches, must be early in their application, as only a few of the first offering will be accepted, without a premium ; none will be received under twelve years of age, or upwards of fifteen. All orders from the country, or other provinces, inclosed in letters, post paid, and directed to the CHINA PROPRIETORS in Philadelphia, will be faithfully executed, and the Ware warranted equal to any, in goodness and cheapness, hitherto manufactured in, or imported from England."

This card, which was printed first on December 29, 1769, fixes the date of the beginning of this enterprise, as it clearly states that the works were then in course of erection. Subsequently the proprietors advertised for bones, offering twenty shillings per thousand "for any quantity of horses or beeves shank-bones, whole or broken, fifteen shillings for hogs, and ten shillings for calves and sheep (a proportionable price for knuckle bones), delivered at the china factory in Southwark," concluding with the announcement that the capital works of the factory were then completed and in full operation. The projectors of this enterprise were Gousse Bonnin, who had most probably learned his trade at Bow, and George Anthony Morris, of Philadelphia. In January, 1771, they applied to the Assembly for pecuniary assistance, in the form of a provincial loan, the petition as laid upon the table in the Assembly room, being given in full by Colonel Frank M. Etting, in his History of Independence Hall, which reads as follows :

"THE ADDRESS OF THE PROPRIETORS OF THE CHINA
MANUFACTORY.

"Worthy Sirs:—We, the Subscribers, actuated as strongly by the sincerest Attachment to the interest of the Public as to our private Emolument, have at our sole Risque and Expense introduced into this Province a Manufacture of Porcelain or China Earthen Ware, a Commodity, which by Beauty and Excellence, hath forced its way into every refined Part of the Globe, and created various imitative Attempts, in its Progress through the different

Kingdoms and Principalities of Europe, under the Sanction and Encouragement of their several Potentates. Great Britain which hath not been the least backward, in Royal Testimonials of Favour to the first Adventurers, in so capital an Undertaking, cannot yet boast of any great Superiority in Workmanship, surpassing Denmark, France and the Austrian Netherlands, she yields the Palm to Saxony, which in her Turn gives place to the East Indies. America, in this general Struggle, hath hitherto been unthought of, and it is our peculiar Happiness to have been primarily instrumental in bringing her forward ; but how far she shall proceed, in a great Measure, depends on the influence of your generous Support. We have expended great Sums in bringing from London Workmen of acknowledged Abilities, have established them here, erected spacious Buildings, Mills, Kilns and various Requisites ; and brought the work, we flatter ourselves, into no contemptible Train of Perfection. A sample of it we respectfully submit to the Inspection of your Honourable House, praying it may be viewed with a favourable Eye having Reference to the Disadvantages under which we engaged ; if happy enough to merit your approbation we would not wish to aspire at the Presumption of dictating the Measure of your Encouragement, but with all Humility hint at the Manner. You, Gentlemen, who are appointed to a dignified Pre-eminence by the free Votes of your Countrymen, as well for your known Attachment to their truest Welfare, as superior Knowledge, must be sensible, that capital Works are not to be carried on by inconsiderable Aids or Advancements : Hence it is,

we beg leave to point out the Propriety of a Provincial Loan, at the Discretion of your Honourable House, independent of Interest, for a certain Term of Years. Under such Indulgence, on our Part we shall not be deficient in the Display of a Lively Gratitude, and the Promotion of the Colony's service, by the introducing of an additional Number of Experienced Workmen the Extension of our Buildings, and Improvement of the Manufacture, endeavoring to render it equal in Quality to such as is usually imported, and vending it at a cheaper Rate. We have the Honour, etc., etc."

Whether they were successful in procuring the loan does not appear, but later in the same year they advertised for "zaffer or zaffera," without which they could not make blue ware.

A curious old lottery ticket, in the possession of Mr. Ferdinand J. Dreer, of Philadelphia, issued in 1771, evidently has reference to this factory, and shows the straits to which the proprietors were driven to raise funds for the enterprise. The ticket reads as follows :

NEW CASTLE LOTTERY

FOR THE ENCOURAGEMENT OF THE AMERICAN CHINA
MANUFACTURE.

1771.

No. 2257.

This Ticket entitles the Bearer to such Prize as may be drawn against its Number, free from any Deduction.

D.

TOBIAS RUDOLPH.

In April, 1772, the following appeared in the Philadelphia papers :

“WANTED.

“By the Proprietors of the China Manufactory in Southwark, Several apprentices to the painting branch, a proper person being engaged to instruct them : The advantage resulting to poor people by embracing such an opportunity of bringing up their children creditably, are too obvious to be overlooked.

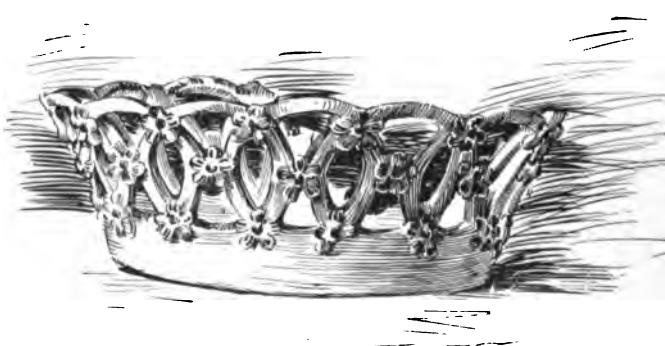
“WANTED ALSO, several apprentices to the other branches, of equal utility and benefit to children. None will be received under indentures for less than seven years, and will be found during that term in every necessary befitting apprentices.”

Shortly afterward they advertised for “fifty wagon loads of white flint stone.” The attempt to make porcelain at this time, however, proved a failure in a financial point, and in the latter year the proprietors made a public appeal for charity in behalf of the workmen who had been brought to a foreign country and were left without means of support. After running about two years, the factory was permanently closed, the real estate was sold, and Bonnin returned to England.

Little is known of the ware made here. The fact that zaffre was used shows that blue decorated ware was made. The employment of bones in large quantities indicated that if porcelain was made here, it was similar to the English bone china. No mention is made in any of the ad-

vertisements of kaolin, and we may therefore conclude that hard porcelain was not attempted. The Bow works at that period were making little but blue and white china, as was the case with all of the early English factories, which employed almost exclusively lapis lazuli and zaffre to color beneath the glaze. It is curious, however, to note what Messrs. Bonnin and Morris assert in their petition in relation to the wares produced in Great Britain, because the fame of Josiah Wedgwood's Basaltes or Egyptian Black Ware, first made in 1766, and the earlier productions of the Etruria works, which began operations in June of 1769, should have reached America previous to 1771. For several years before the latter date Chelsea had been turning out some fine porcelain exquisitely moulded and decorated in several colors. At other factories throughout England artistic china was also made to a limited extent with polychrome decoration. Previous to the year 1770 the Bow factory had commenced to use gold and colors over the glaze, but this fact may not have been known to the American potters. Whether any of the ware produced here was ornamented above the glaze in colors is not known, because we have not been able to positively identify any pieces of this character, although several examples, embellished with baskets of roses in natural colors and other floral decorations, are claimed to have been made at the Southwark factory. In the light of all the evidence which we possess, we can only be certain that cream-colored ware was made here, both in plain white and decorated in blue. An example of the latter is a small white ware fruit-basket in the cabinet of the

Franklin Institute in Philadelphia, six inches in diameter and of excellent workmanship. The sides are of basket or openwork pattern, studded with flower-shaped orna-



44.—WHITE WARE FRUIT-BASKET, BLUE DECORATION. MADE IN PHILADELPHIA
ABOUT 1770. PENNSYLVANIA MUSEUM OF ART.

ments in relief. The decoration is blue, under the glaze, consisting of a floral design in the bottom and zaffre blue rosettes around the sides. Underneath occurs a small P

in blue, which may have been the factory mark (Philadelphia), or the initial of the decorator. There is little reason to doubt the authenticity of this piece, which was "made about the time of the Revolution," and deposited in the Institute by Dr. James Mease, author of *A Picture of Philadelphia* (1811), who was an authority on historical matters and generally reliable in his statements. We know of no other white ware factory in this country which was in operation at that time.¹

"The broken China fruit basket which I have the pleasure to present to the Franklin Institute, was part of a dinner set, and the first attempt at the manufacture of China in the United States, the history of which is as follows :

"Mr. Gousey Bonnin of Antigua, came to Philadelphia before the American War, and his father having been a correspondent of my father's, they became intimate. What led him to the speculation, I never heard, but in an unfortunate hour, he resolved to undertake the manufacture of China the clay for which he procured from *White-Clay-Creek* in the State of Delaware, a few miles from the City of Wilmington, and with the aid of five hundred pounds loaned him by my father he erected a long frame building in Prime St. southward, which I believe now leads from the navy yard west.

"The workmen were doubtless procured from England, and China or Ware of quality of the broken Specimen

¹ Since the above was written, the example described has been placed in the Pennsylvania Museum, together with the original letter of presentation by Dr. Mease to the Franklin Institute in 1841, which has recently come to light. This letter, given here in full, absolutely identifies this piece and gives us further facts relating to the old Southwark factory.

was made, but to what extent I cannot say : However the news was soon conveyed to England that the manufacture had commenced, when speedily arrived cargoes of the English or Dutch Ware sufficient to supply the demand of the Colony or Colonies. Unable to withstand the competition with the manufacturers in Europe, Mr. Bonnin ceased his labours.

"The dinner set of his China was all that my father got for his £500.

"The quality of it was about equal to the Delft ware of Holland of which much of the American table sets was composed, and which was first imported into England previously to being sent to this Country, the direct trade being prohibited.

"JAMES MEASE.

"February 22, 1841."

It does not seem probable that porcelain was ever made here. All white ware was known, at that time, as "china." The wording of some of the advertisements, however, would seem to indicate that the proprietors had the manufacture of a finer ware in contemplation before the disastrous termination of the enterprise. At least no examples of true porcelain made at this factory have, as yet, come to light.

The year 1769 seemed to have marked the establishment of several important ceramic manufactories in the United States. While the Philadelphia china works were in course of erection, a similar project was under consideration in Boston, as appears by an advertisement in the *Boston Evening Post* (weekly), of May 15, 1769, a tran-

script of which has been kindly furnished by the librarian of the Boston Athenæum, which reads as follows:

“ WANTED :

“ Samples of different Clays and fine white Sand. Any Person or Persons that will send about 3lb. of Clay and a Pint of fine white Sand to Leigh's Intelligence Office in Merchants Row, *Boston*, (if its the Sort wanted) the Proprietors will have advantageous Proposals made to them to supply a Quantity. *Boston, May 12, 1769.*”

A subsequent advertisement in the same paper, under date of October 16, 1769, shows that the enterprise was then in full operation :

“ Wanted immediately at the new Factory in New-Boston, four Boys for Apprentices to learn the Art of making Tortoise-shell, Cream and Green colour Plates, Dishes, Coffee & Tea Pots, Cups and Saucers, and all other Articles in the Potter's Business, equal to any imported from England. Any Persons inclining to bind out such Lads to the aforesaid Business, is desired to apply immediately at the said Factory or at Leigh's Intelligence-Office. *Boston, Octo. 16, 1769.*”

In *Holt's New York Journal* of 1774 and 1775 an advertisement appeared describing the ware made in that city at that early day. It is given here in full :

“ EARTHEN WARE.

“ Now manufacturing, and to be sold at the well known House called Katechemet's Mead-House, about mid way

between the New City-Hall and the Tea-Water Pump, on the left hand side of the road as you go out of the city; where city and country store-keepers may be supplied with any quantity of said Ware, at reasonable rates. The Ware is far superior to the generality, and equal to the best of any imported from Philadelphia, or elsewhere, and consists of butter, water, pickle and oyster pots, porringers, milk pans of several sizes, jugs of several sizes, quart and pint mugs, quart, pint, and half pint bowls, of various colours; small cups of different shapes, striped and coloured dishes of divers colours, pudding pans and wash basons, sauce pans, and a variety of other sorts of ware, too tedious to particularize, by the manufacturer, late from Philadelphia,

“ JONATHAN DURELL.

“ N. B.—The purchaser of twenty shillings, or upwards, may depend on having it delivered to any part of this city, without charge.”

From the above it would appear that even before the Revolution the wares made in Philadelphia had acquired a reputation abroad for excellence. It seems that Jonathan Durell had been previously a manufacturer in Philadelphia. In his new field of labor he produced “*striped and coloured dishes of divers colours*,” which he claimed to be “equal to the best of any imported from Philadelphia.” What was the nature of this ware? Most probably the red and black pottery, variegated with green and yellow oxides, which was so commonly made at that period.

Mrs. S. L. Oberholtzer of Norristown informs me that her ancestors, Thomas, John, and Paxson Vickers, successively carried on the manufacture of earthenware in Chester County, Pa., in West Whiteland township, for an uninterrupted period of seventy years previous to 1823, and from that date until 1865, in Uwchlan township. In addition to the ordinary household pottery, they made elaborate vases for flowers, animal and ornamental figures. Mrs. Oberholtzer has in her possession an interesting series of objects from this pottery, consisting of pie-dish moulds, rollers, pounders, and other tools used in the work, the oldest dated example being a mould on which occur the initials J.

V., and the date 1806. The buildings of this old pottery have long since disappeared.

Before the beginning of the present century several stoneware and earthenware potteries were in operation in Connecticut. At "Bean Hill," near Norwich, good ware was made and specimens of pottery in the form of "money-



45.—POTTERY "MONEY-BANK," NORWICH, CT.
JAMES TERRY COLLECTION.

safes" for children, one bearing the date 1794, and another 1812, the latter owned by Mr. James Terry, of New Haven (Ill. 45), are still in existence. A cider-bottle, in the shape of a hollow ring, made to carry on the arm of a mower in the field, is also extant.

In 1791, John Curtis was making a good quality of pottery in Philadelphia, from clay obtained where the brewery now stands, at Tenth and Filbert streets, and his name is found in the city directories as late as 1811, in the same business.

One of the earliest potteries established in Vermont was that of John and William Norton, two brothers, who came from Connecticut and commenced making red earth-ware at Bennington, in 1793. Seven years later they took up the manufacture of plain stoneware, which has been continued down to the present time. The business is at present carried on by Messrs. C. W. Thatcher and E. L. Norton, the former being the first person not a Norton who has ever had an interest in the establishment. The junior member of the firm is a great-grandson of John Norton, one of the founders.

It is probable that other potteries in America followed the example of the Burlington pottery in the manufacture of white ware previous to the opening of the previous century. Mr. John D. McCormick, proprietor of the *American Potters' Journal*, Trenton, N. J., states that "the *New Jersey Journal*, printed at Elizabethtown, in its issue of January 25, 1792, contains the following: 'The Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts,' in their list of pre-

miums for that year offer the following : The conditions are—

“ 1.—To such person as shall exhibit the best specimen of Earthenware or Pottery, approaching nearest to Queensware, or the Nottingham or Delf ware, of the marketable value of fifty dollars—a plate of the value of fifty dollars, or an equivalent in money.

“ 2.—To such person as shall exhibit the best specimen of Stoneware, or that kind of Earthenware which is glazed with salt, of the value of fifty dollars, a plate of fifty dollars' value, or that sum in specie.’

“ The exhibitors were required to have the ware manufactured in New Jersey or Pennsylvania. Here we have abundant proof that there was ware manufactured here closely resembling Queensware in quality, and that its manufacture was encouraged by the society whose advertisement we have just quoted.” As we have already seen, salt-glazed stoneware had been made by at least one pottery, in New York, which started in 1735.

A stoneware pottery was in existence at Norwalk, Connecticut, as early as 1780. Mr. James Lycett, who is at present operating the establishment which is said to be a continuation of the original concern in that place, belongs to a family of potters who have been identified with the trade in Stoke-upon-Trent for a hundred years. It is claimed that his grandfather built the kilns for the Spode works when the first porcelain was made there in the year 1800. His father and uncle came to this country in 1849, and for some time worked at the United States Pottery in Bennington, Vt., where the uncle died. The

senior Lycett then went to Norwalk, where he worked in the pottery of Mr. Asa Smith, afterwards the A. E. Smith's Sons Pottery Co., and subsequently the Norwalk Pottery Company, now owned by Mr. Lycett.

At Old Bridge (now Herbertsville), N. J.; stoneware was made at Van Wickle's pottery, from South Amboy clays, in the first decade of the present century, and similar ware was manufactured at Roundabout (now Sayreville) on the Raritan, about 1802.





CHAPTER VII.

OPERATIONS DURING THE FIRST QUARTER OF THE PRESENT CENTURY.

ANDREW MILLER had a pottery at 37 and 39 Sugar Alley, Philadelphia, previous to 1791, where he continued to make common earthenware for many years. He was succeeded by Abraham and Andrew Miller, Jr., who, from 1810 to 1816, operated a pottery at the corner of Seventh and Zane streets. Shortly afterwards Abraham Miller became sole proprietor, and at the Exhibition of the Franklin Institute, held in October, 1824 (the year in which the Institute was founded), he displayed some "red and black glazed tea-pots, coffee-pots, and other articles of the same description. Also a sample of platinated or lustre pitchers, with a specimen of porcelain and white ware, all of which," according to the report of the judges, "exhibited a growing improvement in the manufacture, both in the quality and form of the articles. It is but a few years since we were under the necessity of importing a considerable proportion of this description of ware for home consumption, but since our potters have attained the art of making it equal, if not superior, to the imported, and as cheap, they have entirely excluded the foreign ware from the American market."

In the Report of the Exhibition of the Franklin Institute, held in October, 1835, it is recorded that "a novel and interesting exhibition was furnished from the pottery of Mr. Abraham Miller, of Philadelphia, consisting of a variety of specimens of black and red earthenware, in the various stages of its manufacture, from the crude material to the finished ware," and at the Exhibition of 1842 he made a display of finer earthenware, such as plates, vases, and ornamental flower-pots. Soon after he commenced the manufacture of charcoal furnaces in great numbers, the larger patterns being provided with a cylinder attachment for roasting coffee, and open grates of fire-brick.

About 1840 Mr. Miller moved his factory to James Street near Broad, as appears in the following card, which has been furnished by Mr. J. H. Buck:

ABRAHAM MILLER
HAS REMOVED HIS MANUFACTORY
From Zane Street to James, near Broad Street,
SPRING GARDEN,
Where his Works are now in full operation, conducted by his Late Foreman, Mr. C. J. BOULTER.

His Warehouse continues in Zane Street,
Next door West of its former place, where he has constantly for Sale, by

WHOLESALE OR RETAIL,

A large Assortment of PORTABLE FURNACES, STOVE CYLINDERS, FIRE BRICKS and SLABS, TEA-POTS and EARTHENWARE, PIPE CASES, DENTISTS' FURNACES, MUFFLES, SLIDES, &c. &c.—KAOLIN and CLAYS, crude or prepared; SILEX and SPAR, crude or levigated to an impalpable powder, and free from impurities.

Sales made only at the Warehouse, Zane Street.

SILEX, or FELSPAR ground, or any article in his line made to order, as speedily as practicable.

(P)All Orders are to be left at the Warehouse, only, where they will be promptly attended to.

Philadelphia, December 22d, 1840.

Elliott, Printer, 41, Chestnut St.

Abraham Miller was one of the most progressive American potters of his day and a man of more than ordinary intelligence and ability, and at one time represented his district in the State Senate, where he was the courageous advocate of numerous reform measures. He was one of the most prominent members of the Franklin Institute for many years, and was frequently selected as one of the judges for the awarding of premiums at the annual exhibitions.

It will thus be seen that Mr. Miller was probably the first in this country to make the lustred or silvered ware which had become celebrated in England. He was also one of the first on this side of the Atlantic to experiment in making porcelain, in which he was remarkably successful, but for some reason he never produced it for the market. His standard or staple productions were red, yellow, Rockingham, and a limited quantity of white ware. He was well versed in the constitution and peculiarities of clays, and at one time made, for his own gratification, some figures with lace-work drapery, which he produced by employing real lace, which he carefully covered with slip of the proper quality and consistency, and which, after being burned away in the kiln, left the clay form as perfect in texture as the original. He made a Tam O'Shanter mug in Rockingham which was very popular at one time, large numbers of them being produced about 1840. Mr. Miller procured much of the machinery and many of the moulds of the Tucker and Hemphill factory when the latter was closed in 1838. He died about 1858 and the business was continued by his foreman,

MR. CHARLES J. BOULTER,

who was at one time connected with the Tucker and Hemphill China Manufactory in Philadelphia, where he remained until the works were closed. Subsequently he became connected with Mr. Abraham Miller at Zane and Seventh streets in the capacity of foreman, and when this pottery was moved to James Street near Broad, in 1840, he became superintendent of the new establishment. After Mr. Miller's death Mr. Boulter carried on the business for many years, manufacturing watch-makers' supplies, dentists', assayers', and cupellers' portable furnaces, muffles, slides, tiles, and fire-bricks. He subsequently moved the works to 1617-1627 North Street, and when he died, on March 2, 1872, the business passed into the hands of his daughters, two of whom, Misses E. A. and A. L. Boulter, still carry it on.

A "china" manufactory existed in Philadelphia in 1800, but very little is known regarding it. A friend has recently shown me a letter, dated August 14, 1800, written by a merchant of that city to his wife, who was then visiting in New Jersey, in which occurs the following interesting bit of news: "On account of a man being murdered at the *China Factory* on Monday evening last, a block maker by trade, a number of the same profession, with Rope makers and Carpenters, assembled and on Tuesday evening began to pull down the buildings; they continued at their work till yesterday mid-day,—it was pulled down by Ropes in spite of all the Squires and Constables that could be collected—say every house, only leaving the Chimneys standing." The writer, an

ancestor of the present owner of the letter, was in business at that time near Fourth and Chestnut streets, and we are led to infer that the factory was somewhere in that neighborhood. All white ware at that time was known as *china*, and the term was evidently applied to queens-ware,—hardly to porcelain.

Messrs. Binney and Ronaldson made yellow and red tea-sets in South Street, Philadelphia, in 1808.

A queensware pottery in Philadelphia, in 1808, was known as the Columbian Pottery, of which Alexander Trotter was proprietor, and examples of his work were exhibited at Peale's Museum in that year. At the great Republican dinner of July 4, 1808, an "elegant jug and goblets from the new queensware manufactory of Trotter & Co." formed part of the table service. Governor Simon Snyder, in his message to the Pennsylvania Legislature, in December, 1809, referred to this factory when he stated that "we have lately established in Philadelphia a queensware pottery on an extensive scale."

The Columbian Pottery was situated on South Street, between Twelfth and Thirteenth, in 1810. The ware produced there was claimed to be equal in quality and workmanship to the best made in Staffordshire. Mr. Trotter retired from business about 1813.

Captain John Mullowny was a brickmaker on Locust Street, near Schuylkill, Philadelphia, in 1808 and 1809. A year later he moved to No. 228 Pine Street, the Washington Pottery, where he made bricks and earthenware. Little is known of this manufactory save what is contained in the following advertisement, which appeared

in the *Aurora,—General Advertiser*, published in Philadelphia, in May, 1810 :

“ WASHINGTON WARE,
Manufactured in Philadelphia at the
WASHINGTON POTTERY :
Red, yellow, and black coffee-pots,
Tea-pots, pitchers, etc., etc.
and for sale,
Wholesale and retail at the ware-house in High,
between Schuylkill 6th and 7th streets.

Any device, cypher, or pattern put on China or other ware at the shortest notice, by leaving orders at the ware-house as above.

Journeymen Potters, and a few *Boys*, may find constant employment, by applying at No. 228, Pine St. or the Ware House above.”

From this it will be seen that the warehouse was on Market Street, near Seventeenth, in 1810, while the works were on Pine Street. In 1813 the latter seem to have been moved to the Market Street warehouse, and Captain Mullowny became director, in which capacity he served for three years or more.

In the early part of this century many of Philadelphia's prominent potters learned their trade at the old Mullowny pottery.

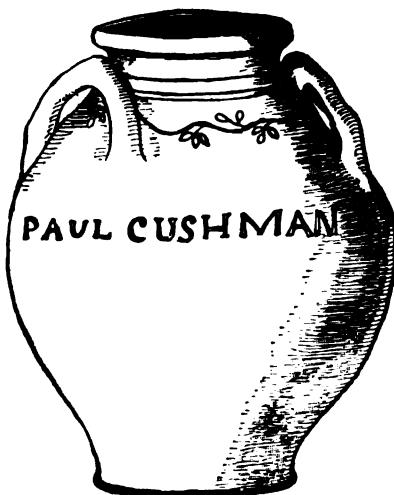
Israel Seymour made stoneware in Troy, N. Y., from about 1809 to 1865.

Paul Cushman had a stoneware factory at Albany, N. Y., in the first decade of this century, and some examples of his salt-glazed ware are now in the possession of Mr. S. L. Frey, of Palatine Bridge, N. Y., one of which bears the inscription, impressed on the surface of the jar,

and twice repeated around the body, "Paul Cushman Stone Ware Factory 1809 Half a Mile West of Albany Gaol." Another, in the form of a jar, fourteen inches in height, is marked with the maker's name; while a third, possessing two ear-shaped handles, is decorated with incised vine-work, in addition to the name (Ill. 46).

The *Central New York Pottery*, of Utica, N. Y., was built by a Mr. Nash about the year 1819. In 1828, Noah White came into possession, and in 1840 the firm name became Noah White & Sons, the new partners being Nicholas A. and William White. About 1853, the last named member withdrew, and the style became Noah White, Son & Co., William N., a son of Nicholas, being admitted. In 1865, on the death of the head of the house, the name was altered to N. A. White & Son, and at the decease of the latter, in 1876, the business passed into the hands of the survivor. In 1880, the firm name was again changed to N. A. White & Son, when Charles N. White, the present manager of the works, was admitted. In 1886, Mr. N. A. White died, at the age of sixty-eight, having been on the property for sixty years.

The original business was the manufacture of coarse



46.—ALBANY STONEWARE. COLLECTION OF MR. S. L. FREY. MADE ABOUT 1809.

stoneware, such as butter crocks, jugs, and jars. In 1852, the manufacture of fire-brick was added, and still continues. At present the works make a specialty of "Flemish" stoneware goods of a high grade. The decorations are artistic and attractive, the colors used being blue, brown, and green. Beer-mugs, tankard-jugs, "growlers," wine-jugs, flower-vases, punch-bowls, match-stands, and spittoons, in many handsome designs and sizes, form but a portion of the products of these works. The metal-



47.

FANCY JUG.

"CARLSBAD" MUG.

WATER KEG.

covered mugs and tankards made here compare favorably with the best imported manufactures of the same class both in form and ornamentation. Special designs and decorations, with suitable inscriptions in English and German, are made to order. The pieces are marked on the bottom with a number corresponding to the price-list number, which gives capacity and size. It is gratifying to Americans to know that goods of such superior excellence and artistic merit can be made at home and

at prices which insure successful competition with foreign wares.

Daniel Freytag was making at No. 192 South Fifth Street, Philadelphia, in 1811, a finer quality of china-ware than had yet been produced in the United States. It was made of various colors, and was embellished with gold and silver; and in 1817 David G. Seixas manufactured an imitation of the Liverpool white crockery from native American clays with great success, continuing the business until 1822.

Porcelain was made in New York City early in the century, probably by Dr. Mead. How long this factory was in operation is not known, but it is believed that a fine grade of ware was made there from American materials. A vase fifteen inches in height, of soft body and exceedingly white glaze, is preserved in the Pennsylvania Museum. This was "finished in New York in 1816," and is supposed to have been made at that factory. The handles are modelled in the semblance of female figures (Ill. 48). It is entirely devoid of gilding or coloring, and is made in two parts, held together by a screw and nut, after the French manner.



48.—PORCELAIN VASE, NEW YORK,
1816.

THE HAIG POTTERY, PHILADELPHIA.

In 1812 Thomas Haig, who came from Scotland, where he had learned his trade as a queensware potter, established a pottery in the Northern Liberties, Philadelphia, where he commenced the manufacture of red and black ware. At the second annual exhibition of the Franklin Institute, Philadelphia, in 1825, Mr. Haig exhibited some specimens of red and black earthenware, "which, if they had been sent in time, might have entitled him to the silver medal." This exhibit consisted of tea-pots, coffee-pots, pitchers, strainers, cake-moulds and pans, "from clay taken in the city. These articles are considered of very superior quality, and are in the opinion of the judges better than goods of the same kind, brought from England. The body of the ware is perfectly burned and deprived of all absorbent qualities. The glaze is good and free from cracks, and the workmanship is neat." Judging from examples in my own possession, which were made at that pottery about that time or a few years later, this flattering description of the ware does not seem to have been undeserved. Indeed the quality of the glazing and neatness of the workmanship are superior to similar wares made at the present time by other potteries.

At the third annual exhibition, in 1826, the Franklin Institute awarded Thomas Haig a "Bronzed Medal" for the best red earthenware sent in.

In 1833, after the death of the founder, his two sons, James and Thomas, carried on the business, and in 1858 were making stoneware, chemical ware, crucibles, etc., in

addition to earthenware, and were using steam for grinding the clay. At the death of the former, Thomas Haig assumed complete control, and died recently, in his eighty-third year. The manufacture of stoneware was discontinued some years ago, but fire-brick, tile, Rockingham, and yellow wares are still made. A few years ago relief plaques and vases were produced, a number of female artists being employed in their decoration, but this branch was soon discontinued for want of sufficient patronage.

At the present time this pottery is also producing terra-cotta flower-pots, fancy earthenware pitchers, glazed hanging baskets, and vases after antique designs, which latter are furnished in biscuit to decorators. One of the potters employed here, Mr. John S. Jennings, has produced some very ingenious miniature pieces in the form of vases, molasses jugs, mugs, and pitchers, which are said to be the smallest specimens ever made in the regular manner on the potter's wheel, some of them being scarcely as large as a pea. Another of Mr. Haig's workmen makes a specialty of "puzzle mugs," on the principle of those made at Brampton, England, in the last century, which are almost identical in form to some produced by John Wedgwood as early as 1691, of which an interesting example may be seen in the Museum of Practical Geology, London.

A stoneware pottery was started at Elizabeth, N. J., somewhere about 1816. At a later date it was operated by a Mr. Pruden who made yellow and Rockingham wares. We have seen some large, heavy water pitchers, decorated with patriotic symbols in relief, which were produced

about the time of the Centennial Exposition. The factory is now owned by Messrs. L. B. Beerbower & Co., who make ironstone china, cream-colored and print-decorated goods in druggists' ware, toilet, table, and culinary sets.

The pottery now managed by the widow of Henry Gast, Lancaster, Pa., dates back to about 1825. Common red and yellow wares were made there, and at one time a limited amount of white ware. Fancy figures, fountains, and statuettes were also produced to some extent in red clay. Latterly this pottery has produced a considerable number of cinerary urns for crematories. At one time white clay tobacco pipes were made, and a few fancy glazed umbrella and cane handles. Floor tiles of yellow clay, octagonal and rhomboidal, were also made to some extent some fifteen years ago. These were heavy, unglazed tiles, six or eight inches across, and an inch in thickness.

THE JERSEY CITY POTTERY.

The Jersey Porcelain and Earthenware Company was incorporated in "the town of Jersey, County of Bergen," on December 10, 1825, under an act of the New Jersey Legislature, in which George Dummer, Timothy Dewey, Henry Post, Jr., William W. Shirley, and Robert Abbott, Jr., were named as incorporators. In the following year the products of the factory were awarded a silver medal at the exhibition of the Franklin Institute, Philadelphia, as being the "best china from American materials." In the Trumbull-Prime collection is a small porcelain bowl, with heavy gold band, which was made at this pottery, of

good body and excellent glaze. The manufacture of porcelain, however, does not seem to have been continued there for more than about three years.¹

The works were purchased by Messrs. D. & J. Henderson about 1829, and a year later they exhibited "flint stoneware" of a superior quality at the Franklin Institute. Mr. A. G. Richmond, of Canajoharie, N. Y., possesses a



49.—THE OLD POTTERY, JERSEY CITY, N. J.

mottled Toby jug made at that period and marked "D & J. Henderson, Jersey City," in a circle, impressed in the paste (Ill. 50). In 1833, David Henderson organized *The American Pottery Manufacturing Company*, "for the purpose of manufacturing the various kinds of pottery, at

¹ In a pamphlet on *The Mineralogy of Chester County, Pa., Delaware, and Maryland*, published by George W. Carpenter in 1828, it is stated that "the manufactory of porcelain at Jersey City has been discontinued, and that at Philadelphia is stated to be the only one in the United States."

the works already erected." By an act of Assembly passed January 18th in that year, Messrs. David Henderson, John V. B. Varick, Robert Gilchrist, John Cassedy, and J. Dickinson Miller, of Jersey City, and Edward Cook, George Tingle, and John Steele, of New York, were appointed commissioners to receive subscriptions to

the stock, which was to be limited to \$150,000. We know little about the ware produced here during the next seven years, excepting the fact that a buff or cream-colored body, of excellent quality, was used extensively. For the first time in America the English method of transfer printing in decoration was adopted by these works. During the exciting Presidential campaign of 1840, or shortly after the elec-



50.—TOBY ALE JUG. MADE BY D. & J. HENDERSON. COLLECTION OF A. G. RICHMOND.

tion, a large eight-sided water-pitcher of cream-colored ware was produced, bearing on each of the four front panels black underglaze prints, consisting of an engraving of a log cabin at the top, over the legend "The Ohio Farmer," a portrait bust of W. H. Harrison in the centre, and the American eagle below. This piece was marked on the

bottom, in black, under the glaze, with a flag bearing the inscription, "AM. POTTERY MANUF^G. CO. JERSEY CITY" (see chapter on Marks). At this time Daniel Greatbach, who came from a family of noted English potters, and is said to have been at one time a modeller for the Ridgways of Cauldon Place, England, was employed at this factory, and designed a large number of ornate pieces, some of which were produced until the factory was closed. An earthen water-pitcher, embellished with hunting-scenes in relief, and handle in form of a deer-hound, continued to be a popular design for nearly half a century (see Ill. 51).

In 1842, an exhibit of goods produced by this company was made at the Franklin Institute, consisting of embossed ware, jugs, tea-ware, etc., which took a silver medal. A glazed white-ware spittoon, evidently one of this series, is still preserved in the cabinet of the Institute, which is decorated with raised, conventional designs in white, on a dark-blue ground, the upper surface being fluted and in solid blue. A cream-colored pottery pan or nappie, of fine body and glaze, in the same collection, with impressed mark, AMERICAN POTTY CO. JERSEY CITY, is another example of the excellent ware produced at that time.



51.—HUNTING PITCHER. DESIGNED BY DANIEL GREATBACH, JERSEY CITY POTTERY.

The name of the establishment was changed to *The Jersey City Pottery* about forty years ago. Many of the best potters of the old school in the United States learned their trade at this factory. In 1848 large quantities of druggists' jars were being made. After several alterations

in the firm name, Messrs. Rouse and Turner became proprietors. The former, Mr. John Owen Rouse, came from the Derby Works, England, nearly forty years ago. Mr. Nathaniel Turner was born and reared among the Staffordshire potteries at Tunstall, and since his death, in 1884, the business has been carried on by Mr. Rouse alone. The products of the factory for some years have been orna-



52.—“WORCESTER” VASE, JERSEY CITY POTTERY.
DECORATED BY MR. EDWARD LYCETT.

mental forms in white biscuit and glazed ivory white for decorators, and porous cups for telegraphic purposes, of which some 5,000 have been produced weekly. Of the plain shapes in ivory white ware, one of the most graceful is the “Worcester” vase, so-called because it is a repro-

duction of an old pattern produced at the Worcester Works in England. It is said that George Washington was presented with a vase of this shape by Mr. Samuel Vaughan of London, in conjunction with a pair of vases of different design, which have been identified as Worcester pieces. An example of this form, from the Jersey City Pottery, is shown on p. 122. It measures two feet in height and was decorated by Mr. Edward Lycett. On a turquoise blue, mottled ground are artistically painted flowers, poppies on one side, and on the other hollyhocks in natural colors. A graceful wreath of convolvulus ornaments the cover. The handles are gilded, and bands of gold encircle top and bottom.

Another effective form was called the "King" vase. The example here figured was decorated by Mr. W. Lycett, now of Atlanta, Georgia. The subject on the side shown in the engraving



53.—"KING" VASE, JERSEY CITY POTTERY.
DECORATED BY MR. W. LYCETT.

is "The Tired Dancing Girl." The painting is applied to the ivory tint of the ware, the borders and handles being of dead gold, heightened with black. On the reverse side is a floral group. This piece measures sixteen and a half inches in height.

When Mr. Rouse first became connected with the works he found a large quantity of the old stock of undecorated porcelain in the warerooms, which has since been sold. A large number of engraved copper plates on hand at that time, since stolen or lost, showed to what extent transfer printing had formerly been practised. Hundreds of the old moulds were, until recently, stored in the loft of the old building, among which were four different varieties and sizes of Toby jugs, a pitcher with rope and anchor decoration in relief, and another with raised designs of tulips, a figure of Christ, an Apostle jug with raised representations of apostles in panels, hunting pictures, etc., some, if not all, being the work of Greatbach. We have seen examples of the largest Toby pitcher made here (about 1840), nearly a foot in height, with excellent brown glaze outside and lined with white. Pitchers and other pieces were also decorated with medallion portraits of prominent men, modelled in relief, a likeness of Daniel O'Connell being among the best.

In the summer of 1892 the old pottery property passed into other hands, and the old buildings, which had stood in almost their original condition for more than sixty-five years, were torn down to make way for a new manufacturing establishment. Both wings of the original structure were standing, in a good state of preservation until November of that year, when the work of demolition commenced,

and at the same time wagon loads of the old moulds, which had cost thousands of dollars, the accumulation of over half a century, were hauled away and ruthlessly dumped on the meadows. Thus has disappeared one of the oldest ceramic landmarks, dear to the memory of many an old potter still living, as the cradle of the pottery industry in the United States. All of the moulds of vessels were destroyed, but from this wreck a small series of ornamental designs, believed to have been, for the most part, made by Greatbach during the earlier years of the pottery's existence, were rescued by Mr. Rouse and, at the solicitation of the writer, placed in the collection of the Pennsylvania Museum of Art. These consist of finely modelled leaves, animals in hunting scenes, floral designs, and other decorative details.

In 1878 Messrs. Rouse and Turner presented to the Metropolitan Museum of Art, New York, a pottery barrel, with relief ornaments, made about 1830, at this pottery, by David Henderson. A many-sided pottery pitcher, surmounted with Toby head, is owned by Rev. F. E. Snow, of Guilford, Conn., on which is the mark, "AMERICAN POTTERY CO., JERSEY CITY, N. J." impressed in a circle.

Mr. John O. Rouse still continues the manufacture of porous cups within two blocks of the site of the old pottery.





CHAPTER VIII.

THE AMERICAN CHINA MANUFACTORY.

AS we have already seen, several partially successful attempts had been made toward the manufacture of porcelain by progressive potters in the United States previous to the year 1825, but to Mr. William Ellis Tucker, of Philadelphia, belongs the honor of being the first to supply the home market with a purely American product of this character. The story of his remarkable life-work and the history of the factory which he established, the first important one of its kind on this side of the Atlantic, cannot fail to prove of especial interest to the ceramic student. Commencing his investigations with no previous knowledge of the composition of the ware, nor of the processes of its fabrication, he set resolutely to work to discover its hidden mysteries, and, wholly unaided by the practical experience of others, he succeeded in a few years in perfecting from new and untried materials, a porcelain equal in all respects to the best which England had produced after eighty years of continual experiment. His body was neither that of the French potters nor the true bone of the English, but partook of the characteristics of both, the proportion of phosphate of lime, as shown by analysis, being about eight per cent., a very much

smaller percentage than in the English bone body. While, therefore, the Tucker china cannot be classed as a soft paste, its specific gravity and thoroughly vitreous character would seem to fairly entitle it to be called a hard porcelain, which it more nearly resembles. Indeed, fire-tests made by Prof. Isaac Broome, to whom I submitted specimens, show that the Tucker porcelain will stand a higher degree of heat than the Sèvres ware.

Strange as it may appear, but little has been published relative to this early venture, although sixty years ago Philadelphians justly prided themselves on their "China Factory," and were in the habit of taking strangers to visit it, as one of the principal points of interest in the city. The following account of this enterprise includes most of the material which I prepared for *Lippincott's Magazine* of December, 1892, and a number of the illustrations used here have been furnished through the courtesy of the editor of that journal.

During the years 1816 to 1822, Benjamin Tucker, a member of the religious Society of Friends, had a china shop on the south side of Market (then called High) Street, at No. 324, between Ninth and Tenth streets, Philadelphia, near where the new Post-Office building now stands.¹ Within this period he built a small kiln in the rear of his property for the use of his son, William Ellis Tucker, who was thus enabled to employ much of his time in painting on the imported white china and firing it in

¹ Some time previous to 1825, Benjamin Tucker, the father, retired from the china business and established a select academy at the southwest corner of Fifth and Mulberry streets, where for several years he was known as a prominent educator. He had been a teacher from 1799 to 1814, as the Philadelphia directories show.

the kiln. These attempts at decoration were at first crude and unsatisfactory, but they served to arouse an interest in the subject, which soon led him to commence experimenting with different clays which he procured in the vicinity of the city. These investigations finally resulted in the production of a fair quality of opaque queensware. He then turned his attention to kaolin and feldspar, and, after repeated failures, he at length succeeded in discovering the proper proportions of these ingredients, with bone-dust and flint, necessary for the manufacture of a high grade of porcelain. The body thus obtained was translucent and of considerable hardness, density, and toughness, and capable of withstanding extreme changes of temperature. The glaze was perfectly adapted to the body and of excellent composition.

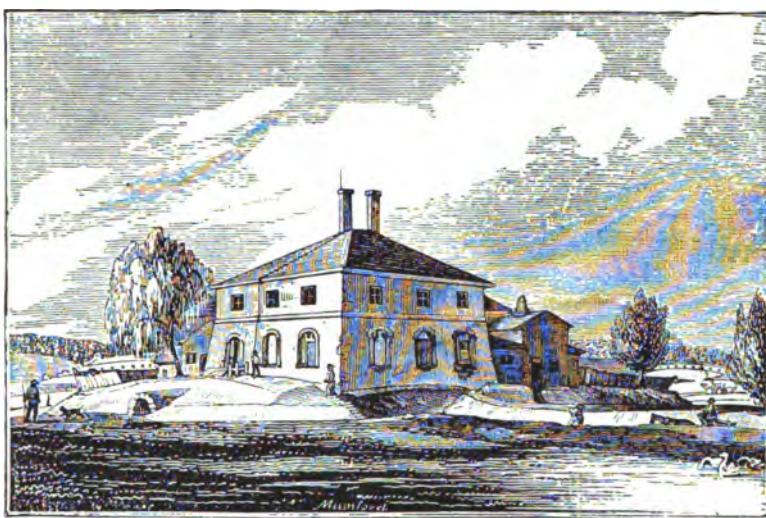
About the year 1825, Mr. Tucker first seriously attempted the manufacture of the ware as a business venture. The old water-works at the northwest corner of Schuylkill-Front (Twenty-third) and Chestnut streets were obtained from the city, in which the necessary kilns, etc., were erected.¹ On October 23, 1826, he purchased four acres of land, on which a feldspar quarry was situated, from Alexander Dixon, of Newcastle County, Delaware.

Mr. Thomas Tucker, a younger brother, who was at a later date, as we shall see, associated with him in the business, prepared an historical sketch of this factory, which was read before the Historical Society of Pennsylvania, on June 8, 1868. The following quotations from this paper

¹ Mr. Charles Henry Hart informs me that a water-color, by Captain Watson, of the Royal Navy, entitled, "View from the Porcelain Factory near the Schuylkill Permanent Bridge," was exhibited at the Academy of Fine Arts, Philadelphia, in 1829.

will show some of the difficulties encountered in the manufacture of porcelain at that period :

" He burned kiln after kiln with very poor success. The glazing would crack, and the body would blister ; and, besides, we discovered that we had a man who placed the ware in the kiln who was employed by some interested parties in England to impede our success.



54.—THE OLD WATER-WORKS, PHILADELPHIA, USED AS A CHINA MANUFACTORY
IN 1825.

" Most of the handles were found in the bottom of the seggars after the kiln was burned. We could not account for it, until a deaf-and-dumb man in our employment detected him running his knife around each handle as he placed them in the kiln.

" At another time, every piece of china had to be broken before it could be taken out of the seggar. We always washed the round O's, the article in which the

china was placed in the kiln, with silex ; but this man had washed them with feldspar, which of course melted, and fastened every article to the bottom. But William discharged him, and we got over that difficulty."

While the body and glaze of Tucker's earlier pieces were good, the workmanship and decoration were inferior.

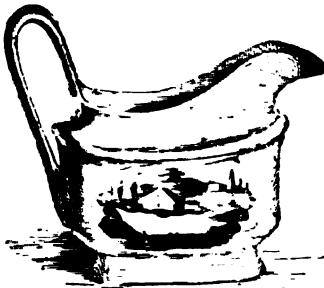
A premium was offered by the Franklin Institute, at its Fourth Annual Exhibition, held in Philadelphia on October 18, 1827, "for the best specimen of *porcelain*, to be made in Pennsylvania, either plain white, or gilt,"

and the following is taken from the report of the Committee on awards: "This is a manufacture of great importance to the country, as most of the capital expended is for labour ; the materials being taken from our soil, in great abundance and purity. The highest credit is due to Mr.

Wm. E. Tucker for the degree

of perfection to which he has brought this valuable and difficult art. The samples (No. 174) of this ware were made by him. The body of the ware appeared to be strong, and sufficiently well fired, the glaze generally very good, the gilding executed in a neat and workman-like manner. Some of the cups and other articles bear a fair comparison with those imported," and for this exhibit a silver medal was awarded.

In 1828 Mr. Thomas Tucker commenced to learn the different branches of the business. At the exhibition of



55.—TUCKER CREAMER.
SEPIA DECORATION.

the Franklin Institute in this year, Mr. Tucker received a second silver medal for the exhibit of one hundred pieces of best porcelain made in the United States, gilt, painted, and plain. The Judges compared it favorably with the best French china, and pronounced it superior in whiteness and gilding. During the same year, Mr. Thomas Hulme, of Philadelphia, invested some money in the business and was admitted to partnership, as appears by the mark found on a number of pieces made in that year, being printed in red, beneath the glaze,—“Tucker & Hulme, China Manufacturers, Philadelphia, 1828.” These examples show a marked improvement in decoration over anything that had emanated from this factory before. The rough brown daubs intended for embellishment, but execrable to a degree, gave place during this period to artistic groupings of flowers and fruits, painted in natural colors. This partnership, however, does not seem to have continued for more than a year or so. Whether the withdrawal of funds from the business by Mr. Hulme proved an embarrassment to the senior partner does not appear, but it is known that Mr. Tucker soon afterward experienced the necessity of government support, and applied to Congress for aid. He placed himself in communication with some of the public men at the national capital, among others Andrew Jackson, as the following letter will show :

“WASHINGTON, April 3d, 1830.

“SIR,—I have had the honor to receive your letter of the 3d of March, and since, the porcelain which it offered to my acceptance. I was not apprised before of the perfection to which your skill and per-

severance had brought this branch of American manufacture. It seems to be not inferior to the finest specimens of French porcelain. But whether the facilities for its manufacture bring its cost so nearly to an equality with that of the French, as to enable the moderate protection of which you speak to place it beyond the reach of competition in the markets of the world, is a question which I am not prepared to answer. If congress could be made acquainted with the experiments on the subject, and they should confirm your favorable anticipation, there would be scarcely a doubt of its willingness to secure the important results of the manufacture. I do not see, however, any mode by which this can be effected on any other principle than that of protection. You would probably have a right to a patent for the discovery, but this right would have to be determined in the usual way. Congress have refused to make a donation to the heirs of Robert Fulton for the national benefits resulting from his discovery, upon the principle that the Constitution does not provide any other reward for the authors of useful discoveries than that which is contained in the article in relation to Patents. The same objection would of course defeat your application for \$20,000, as a remuneration for this discovery, or as a reward for its free communication to the world.

"It will give me much pleasure to promote the objects you have in view, so far as they are within my constitutional sphere. There is no subject more interesting to me than that which concerns the domestic economy of our country, and I tender you my sincere thanks for an example of its success so creditable to yourself.

"With great respect believe me

"Yr. Obt. Svt

"ANDREW JACKSON.

"Mr. WM. ELLIS TUCKER,
"Philadelphia."

While his application to Congress proved futile, he continued the manufacture, and in 1831 received from the American Institute of New York a silver medal for an exhibit of his wares in that year.

On the 22d of August, 1832, William Ellis Tucker died, but previous to that date Judge Joseph Hemphill,¹ of Philadelphia, had been admitted as a partner in the business. The latter had recently returned from a trip to Europe, where he had become deeply interested in the manufacture of porcelain. Messrs. Tucker and Hemphill purchased the property at the southwest corner of Schuylkill-Sixth (Seventeenth) and Chestnut streets, where they erected a large factory, storehouse, and three kilns, and greatly increased the producing capacity of the works. In 1832, scarcely two months before Mr. Tucker's death, they made another appeal to Congress for the passage of a tariff bill which would afford them protection from foreign competition. In reply to a letter written to Henry Clay at that time, the following, bearing on this subject, was received :



56.—“GRECIAN” PITCHER. (BARBER COLLECTION) PENNSYLVANIA MUSEUM.

¹ Judge Hemphill was born in Delaware Co., Pa., on January 7, 1770, and was appointed President Judge of the District Court in Philadelphia, by Gov. Snyder, in 1811, serving in that capacity for several years. He afterwards represented that city in Congress for three terms. He died on May 29, 1842.

I have not been able to ascertain that William Ellis Tucker, the china manufacturer, was related to William E. Tucker, who was at one time a prominent landscape and historical engraver in Philadelphia. The latter, while a contemporary of the former, lived until 1857, and was never interested in the porcelain industry. The similarity of names has naturally led to the erroneous impression that the potter and the engraver were one and the same, especially as the earliest productions of the Philadelphia China Factory were often decorated with landscapes and historical views.

“ WASHINGTON, 23d June, 1832.

“ GENTLEMEN :—I received your favor of the 21st inst. on the subject of your manufacture of Porcelain. I had been previously aware of its existence, and had seen some beautiful specimens of its production.

“ When the Tariff bill shall be taken up in the Senate, I will take care that its attention shall be drawn to it. Such is the state of parties here, however, the friends of protection combating against the Treasury



J. Humpill

57.—PORTRAIT OF JUDGE JOSEPH HEMPHILL.

bill, sustained by the whole weight of the Administration, that it is extremely difficult to anticipate results or any part of the Tariff.

“ With great respect,

“ I am your ob. serv.,

“ Messrs. TUCKER & HEMPHILL,

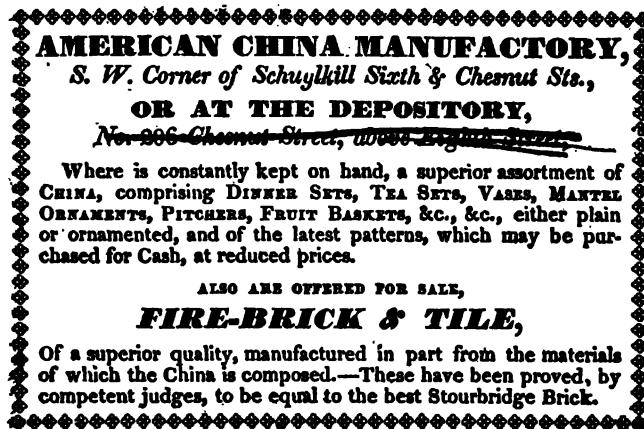
“ H. CLAY.

“ Porcelain Manufacturers,

“ Philadelphia.”

A card in my possession, which has been kindly sent to me by Mr. James H. Buck, of Philadelphia, was issued

from the new factory at Seventeenth and Chestnut streets about that time, a fac-simile of which is here given. It is interesting on account of the information it contains.



After the death of the founder, Mr. Thomas Tucker continued to superintend the business, which was carried on in the name of Joseph Hemphill, who associated with him his son, the late Mr. Robert Coleman Hemphill, of West Chester, Pa.

In the settlement of Mr. Tucker's estate, the value of three kilns and slip pan, at the new factory, was estimated by Mr. Brinton Corlies, the appraiser, at \$1,100, "the iron work not included."

Soon after the business passed into the hands of Judge Hemphill artists and artisans were brought over from France, England, and Germany, and a more pretentious style of decoration was introduced. The French methods of ornamentation came much into vogue about this time. The ware was sold very extensively to the well-to-do people in Pennsylvania and New Jersey, and nearly every family of prominence or wealth had table

services or pieces made to order and decorated with initials, monograms, medallions, or armorial bearings, usually enclosed in wreaths of flowers or gold tracery. Compact bands of exquisitely painted flowers, in which the rose, tulip, and forget-me-not were generally prominent, encircled many of the finer pieces. Some of the vases and pitchers and many of the table pieces were close

copies of Sèvres forms, and some of the ware sold at the present time for French work by bric-a-brac dealers, was made in Philadelphia between 1833 and 1838. Excellent portraits of prominent men were painted on some of the larger pieces, an example of the latter being still preserved in a pitcher owned by Hon. William Wayne, of Paoli,

58.—HEMPHILL PITCHER, WITH PORTRAIT OF WASHINGTON. (BARBER COLLECTION) PENNSYLVANIA MUSEUM.

Pa., which is embellished on one side with a view of the historic monument at Paoli, and on the other with a colored likeness of Major-General Anthony Wayne, copied from an oil portrait by Charles Wilson Peale. This interesting piece is one of a pair made for Colonel Isaac Wayne, son of General "Mad Anthony," and is marked on the bottom, in red, "Manufactured by Jos.



Hemphill, Philad." A similar example, in the Pennsylvania Museum, is a pitcher containing a tinted portrait of General Washington, which, according to Mr. Charles Henry Hart, an authority on Washington portraits, is evidently a copy of one of William Birch's enamels after Stuart's first picture, known as the Vaughan portrait, now in the possession of Mrs. Joseph Harrison, of Philadelphia. Mr. Ferdinand J. Dreer, of the same city, also owns a porcelain vase on which is a painting of Napoleon at the burning of Moscow, which he purchased at the factory in 1833.

In this year Judge Hemphill received honorable mention at the Exhibition of the Franklin Institute for his exhibit of "various samples of American porcelain, in the moulding and glazing of which great improvement has been made since the last exhibition; the body of the article is considered equal, if not superior to that of the imported." He also received a diploma and silver medal from the American Institute of New York in the same year.

The porcelain works continued with varying success for several years. By an Act of Assembly dated April 15, 1835,¹ an American Porcelain Company was incor-



59.—VASE, NAPOLEON AT THE
BURNING OF MOSCOW. MR.
FERNAND J. DREER.

¹ An Act to Incorporate an American Porcelain Company, passed April 15, 1835. Thomas P. Cope, Alexander Read, William P. Bryan, Thomas Tucker, Rockland

porated, consisting of Eastern gentlemen, to whom Judge Hemphill sold his interest. Whether this company ever operated the works does not fully appear, but it would seem doubtful, as Judge Hemphill made an exhibit of wares again at the Franklin Institute in 1836. It is said that the company, being unfortunate in other enterprises, were not able to give the porcelain manufacture proper attention.

On October 1, 1837, after the retirement of Judge Hemphill, the factory was leased for a term of six months by Mr. Thomas Tucker, who purchased all of the unburned ware then on hand, with the other materials and fixtures, as appears in an article of agreement signed by John Rynex, at Boston, who seems to have acquired the property, or acted in the capacity of agent. The new proprietor continued the manufacture of fine porcelain for about a year, until he had filled a store, which he had taken on Chestnut street, above Seventh, with the ware. He then discontinued the making of porcelain, and engaged in the business of importing china from Europe. In the latter

Thompson, Robert Coleman Hemphill, and William M. Muzzey were appointed Commissioners.

"Sec. 5. The said company in the name and style of the American Porcelain Company . . . shall have the further right . . . to rent or purchase, in fee simple, the existing factory and house adjoining, at the corner of Schuylkill Sixth and Chestnut streets, in the city of Philadelphia, with such other ground as may be deemed necessary, also to purchase and hold, as aforesaid, quarries of feldspar, beds of kaolin and clay and to procure every material used in the manufacturing of Porcelain, either plain, white or decorated with paintings and gilding, and all the machinery, apparatus, tools and utensils required for the above purpose, and to employ all such workmen, tradesmen, painters, gilders and other artists of every description that may be necessary to carry on the establishment, either by sending to Europe or otherwise: And further, in order to enable the company to commence immediate sales, they shall have the right to purchase the American Porcelain on hand at the above factory, whether finished or in an unfinished state."—(*Pamphlet Laws of Pennsylvania, 1835*, p. 338.)

part of 1841 he sold out his entire stock at his store, 100 Chestnut St., through Mr. C. C. Mackey, auctioneer. Mr. Tucker afterwards engaged in the cotton business, and died in Philadelphia in July, 1890.

It thus appears that the manufacture of Tucker and Hemphill porcelain was discontinued in the year 1838, after extending over a period of about thirteen years.

Kaolin for the earlier Tucker factory was obtained from the land of Israel Hoopes, in New Garden township, Chester County, Pa., now occupied by Graham Spencer. Feldspar was quarried from a large deposit on property owned by Alexander Dixon, near Christiana Hundred, Newcastle County, Delaware, about six miles from Wilmington, placed in barrels, hauled to the latter place, and loaded on vessels for shipment to Philadelphia. Blue clay, or fire-clay, was brought from John Flood's farm, four miles from Perth Amboy, N. J., which property came into possession of the heirs of W. E. Tucker at his death.

Mrs. Moses Johnson, of Berlin, Md., a great niece of Alexander Dixon, owns some of the earlier pieces made by Mr. Tucker, which were sent to her grandmother, as samples of the ware, about 1825; and Wilton Agnew, of Kennet Square, Pa., a nephew of Mr. Dixon, has in his possession two saucers, the remains of a set which was made for his mother about the same time, of spar taken from the Dixon quarry. These examples are all embellished with sepia landscapes.

Joseph S. Quarll, of Toughkenamon, Pa., is the pos-

sessor of two handsome pitchers, with floral paintings, made from kaolin which he helped to haul from New Garden to Wilmington in 1828, for the Tucker and Hulme factory. These are marked on the bottom, in red, "Tucker & Hulme, China Manufacturers, Philadelphia, 1828," and Esther H. West, of Avondale, near by, has a third piece, similarly signed and dated.

The feldspar quarries of Tucker and Hemphill were situated, in 1832, on Jacob Way's farm, directly opposite the Alexander Dixon quarries in Delaware, and in 1837, Judge Hemphill procured kaolin from the land of John Pennington, West Grove, Pa.

The first productions of the W. E. Tucker period are now scarce. The only attempts at ornamentation were crude and inartistic. Simple landscapes, butterflies and the like were painted roughly, always over the glaze, in sepia or brown monochrome. The former were all of the same general character,—a house, with lake in the foreground and mountains in the distance, produced by a few sweeps of the brush,—but no two exactly alike in details. The decoration was always done by hand; the printing or transfer process does not seem to have been employed at any time in the history of the works. A sugar-bowl and coffee-pot, with large butterflies rudely painted in brown, are the property of Joseph S. Quarll, and are characteristic examples of this period. Occasionally historic buildings were represented, as in a small plate in the possession of Mrs. Annie C. Tyndale, of Media, Pa., who received it from Mr. Horace J. Smith, of Philadelphia. This contains a painting of William Penn's cottage in monochrome.

During the Tucker and Hulme period, as has already been shown, there was a decided improvement in decoration. In addition to the pieces already mentioned, Mrs. Francis D. Wetherill, of Philadelphia, owns two pairs of pitchers made in 1828, one being marked in gold with the initials of her grandfather, Mr. John Price Wetherill, and the other pair with those of her great-uncle, Mr. Samuel P. Wetherill, the latter being dated. These were all made at the same time and are ornamented on both sides with bunches of tulips, roses, etc., in natural colors. In my own possession are a teacup and saucer of fine, smooth paste and graceful form, embellished with gold fern work, and a small pitcher decorated in colors. In the Pennsylvania Museum at Fairmount Park, Philadelphia, may also be seen another specimen, presented by Mr. Charles Henry Hart, which is somewhat thicker and heavier than the others described above, and decorated only with gold bands and the letters C. B. This piece was made for Mr. Charles Burd and is marked on the bottom, in red, beneath the glaze, "Tucker & Hulme, Philadelphia, 1828."

A complete tea service belonging to Mrs. William McIlvaine, of Reading, Pa., procured from the factory in 1834 or '35, is decorated with sepia landscapes and gold bands, and conclusively shows that the monochrome style was still employed to some extent after Judge Hemphill took control.



60.—SMALL COVERED FLOWER-VASE, SEPIA LANDSCAPE.
MRS. R. C. HEMPHILL.

We have no means of identifying the ware produced during the Tucker and Hemphill era, because the partnership was of such brief duration and none of the pieces appear to have been marked. Of the Hemphill period, however, numerous exam-

ples are in existence. Perhaps some of the finest are owned by Mrs. Robert Coleman Hemphill, of West Chester, Pa., a daughter-in-law of Judge Hemphill, which

were made expressly for the family by the best workmen in the factory. A small flower-vase, painted in colors, shows the best work produced. A cylindrical flower-pot, with wreath of flowers encircling the circumference; a toilet-set, decorated in the same elaborate manner and heavily gilded; a large water-pitcher,



61.—WATER-PITCHER, DECORATED IN RELIEF. MRS. ROBERT COLEMAN HEMPHILL.



62.—HEMPHILL VASE. COLLECTION OF HON. JAMES T. MITCHELL.

the lower half with raised ornamentation in white, consisting of horses and dogs, the upper portion decorated with a band of artistically painted flowers and gold tracery, are a few of the pieces which remain of a large collection. The relief design on the latter bears a remarkable resemblance to that which occurs on an old English parian pitcher in the Trumbull-Prime collection at Princeton. The *chef-d'œuvre* of the series, however, is a cylindrical night lamp, of thin, transparent porcelain, exquisitely decorated with a continuous rural scene in bright colors, extending around the centre (see Ill. 70).

Hon. James T. Mitchell, of the Supreme Court of Pennsylvania, is the owner of a flaring vase, 63.—HEMPHILL VASE, WITH PAINTING OF six inches high, on which is painted a group of fruits and flowers and on the opposite side, in gold, "E. Tyndale, 1833," having been made for his mother at the Hemphill factory and presented to her in that year.

A pair of amphora-shaped vases in the possession of Mrs. Amanda Spiegel, of Philadelphia, which were pre-



63.—HEMPHILL VASE, WITH PAINTING OF
A SHIPWRECK.

sented to her father-in-law, Mr. Isaac Spiegel, when in the employ of Judge Hemphill, are copies of an old Sèvres form and measure about a foot in height, being in two parts. They are of a good semi-transparent body, decorated with much goldwork and marine views depicting shipwrecks. The painting is excellently executed, evidently by a French artist (Ill. 63).

Mr. William S. Negus, of Bound Brook, N. J., has a



64.—HEMPHILL PORCELAIN TABLE-WARE. COLLECTION OF MR. W. S. NEGUS.

table service which was made by Judge Hemphill about 1834. It is remarkable for its bands of pink roses and heavy goldwork, the interior of the cups being solidly gilded half-way to the bottom.

A christening-bowl, "Presented to the First Presbyterian Church, West Chester, Chester County (Pa.), February 22, 1834, by Joseph Hemphill of Philadelphia," is a fine example of the ware made at that time. It measures

nine and one half inches across and is decorated with heavy gold bands at the top and bottom, solidly gilded handles, and gold wreath with blue forget-me-nots, in which is inclosed the above inscription, also in gold.

In the family of the late Mr. Thomas Tucker, of Philadelphia, some of the best pieces of the later productions of this factory are preserved. These include two pairs of cologne bottles (see Ill. 69), of different size and design, made after Chinese patterns, elaborately ornamented with goldwork applied to relief designs, and the date 1837; a vase with painting of the factory at



65.—CHRISTENING-BOWL. MRS. THOMAS W. MARSHALL.

Seventeenth and Chestnut streets, and a pitcher painted with flowers and birds, after nature, the mate of which is owned by Mrs. General Hector Tyndale of the same city. Perhaps one of the finest examples ever made by Mr. Tucker is the large vase, owned by his widow, which is over two feet in height and embellished with a wreath of richly painted flowers and gold and salmon-colored bands. The plinth is solidly gilded, as are the handles, which are in the form of eagles' heads, with wings meeting above. The manner in which Mr. Tucker came into possession of this valuable piece is interesting. Walking down

Second Street one day he happened to see it perched on a shelf in the top of a window in a second-hand shop, and immediately recognizing it as one which he had himself made, years before, he purchased it and took it home.



66.—TUCKER & HEMPHILL'S CHINA MANUFACTORY, PHILADELPHIA, 1832-'38. FROM A VASE OWNED BY MRS. THOMAS TUCKER.

One of the most characteristic patterns produced by the old Philadelphia China Factory was the classical pitcher with circular body, arched handle, and corrugated band at base. This form has become the most familiar

to the public because it was a favorite with the manufacturers and seems to have been peculiar to this factory. It was known as the "vase-shaped" pattern. Another rather common form was the cylindrical vase with flaring mouth, a reproduction of an old French form. It is not generally known that the Tucker and Hemp hill productions included an almost endless variety of ornamental as well as utilitarian forms, hence some of the rarest pieces are not recognized by collectors, but are thought to be French. Some idea may be obtained of the variety of forms when it is known that the original pattern books (which at the suggestion of the writer have been presented to the Pennsylvania Museum by Mrs. Thomas Tucker) show, during the last six years of the factory's



67.—LARGE PORCELAIN VASE, OVER-GLAZE DECORATION IN GOLD AND COLORS. OWNED BY MRS. THOMAS TUCKER.

history, over 140 different standard designs in table pieces and vases alone. Many other pieces, such as spirit lamps with teapots, flower jars, miniature and picture frames, smelling vials, inkstands, mantel ornaments, etc., were made to some extent, and examples of these are still occasionally met with. Small porcelain bottles with stoppers were made in three forms,—cordate,¹ shell-shaped,

and eared, and daintily decorated in colors, for holding smelling salts and cologne.

Other forms of pitchers made at these works were called the "Star," "Grecian," "Fletcher," and "Walker" shapes. Some of the most characteristic decorations, in addition to those already described, were landscapes in black, or in brown and green, tiny pink roses scattered over the entire surface, and large bold roses in natural



68.—"VASE-SHAPED" PITCHER, OVER-GLAZE DECORATION IN COLORS AND GOLD. PENNSYLVANIA MUSEUM.

colors. On table ware, festoons of gold and minute bands of gold flowers; small blue, green, and brown "corn flowers"; purple and green vines; green periwinkles with brown stems; pink, blue, and green

¹ The plaster mould for the heart-shaped scent bottle was until recently in the Franklin Institute. It is now in the collection of the Pennsylvania Museum, Philadelphia.

sprays; wreaths and bunches of flowers in which the rose, tulip, forget-me-not, morning-glory, ragged-robin, honey-suckle,—all in delicate colors, and fern leaves and moss rose-buds in gold. Scalloped cups and saucers, with broad vertical bands of alternate pink and brown, were also made, and handles of sauce boats and other utensils were often moulded in the forms of serpents' and lizards' heads.

The following price list of articles made at Seventeenth and Chestnut streets, between 1832 and 1838, copied from the records of the factory, will show what the public paid in those days for undecorated pieces of the ware:



69.—COLOGNE BOTTLE,
RAISED DECORATIONS,
GOLD TRACERY. MRS.
THOMAS TUCKER.

Pitchers.....	\$1.00	each.
Teapots.....	1.06 $\frac{1}{2}$	"
"	1.25	"
"	1.00	"
Sugars.....	75	"
"	62 $\frac{1}{2}$	"
Coffee-pots.....	2.00	"
Creams.....	37 $\frac{1}{2}$	"
Gravy boats.....	50	"
Shell dishes.....	1.00	"
Custard stands.....	3.00	"
Square comforts.....	1.00	"
Round dishes.....	75	"
Fruit baskets.....	2.00	"
Stands for same.....	75	"

High compoteers.....	2.50	each.
Cake stands.....	1.00	"
Salads, octagon.....	2.00	"
Tumblers.....	3.00	doz.
Large plates.....	4.50	"
Cup plates.....	1.50	"
Plates.....	2.50	"
"	4.00	"
Muffins.....	2.00	"
Dishes.....	2.00	each.
"	1.75	"
Saucers.....	1.50	doz.
"	2.00	"
Cake saucers.....	0.25	each.
Terrenes.....	3.50	"
Cups.....	1.50	doz.

The pattern books of the china factory contain drawings of pieces not enumerated in the foregoing list, on which the selling prices were marked. From these books, which have been kindly placed at my disposal, I take the following :

Cylindrical spirit lamps, with teapots.....	\$1.60	each.
Vase shaped " " " "	2.50	"
Large pedestal vases (undecorated, of course)	1.50	"
French vase (amphora-shaped).....	1.50	"
Butter coolers.....	1.00	"
Funnels.....	2.00	"
Pitchers (Fletcher's shape).....	1.50	"
"(Walker shape) third size.....	37½	"
"(Grecian shape).....	75	"
"(Vase shape).....	1.00	"
"(Star shape).....	1.00	"
Round jugs, small.....	50	"

Some of the wages paid at the factory to artists, in 1832, for decorating pieces were as follows :

Landscapes (in brown).....	4 cts each.
Phoenix	2 " "
Bands (gold).....	8 " doz.
Best groups (colored).....	18 $\frac{1}{4}$ " each.
Common groups.....	12 $\frac{1}{2}$ " "
Fruit baskets.....	18 $\frac{1}{4}$ " "
Mantels, ¹ richly ornamented.....	25 " "
Cyphers, from one to four.....	2 " "

Prices for burnishing, same date :

\$10 Pitchers.....	15 cts.
Vases, full gilt.....	15 cts.

The wages paid for making, turning, finishing, etc., were as follows :

Mantel ornaments, large size.....	8 cts. each.
" " second size.....	6 " "
Large size coffee-pots.....	20 " "
Oyster dishes, large size.....	25 " "
Slop bowls.....	4 " "
Moulded cups.....	1 " "
" saucers.....	1 " "
Extra large size dinner plates.....	3 " "
" " breakfast plates.....	2 " "
Tea plates.....	1 ct. "
Cup plates.....	1 ct. "

For Moulding :

Teapots.....	12 $\frac{1}{2}$ cts.
Pitchers (two quarts).....	12 $\frac{1}{2}$ "
Gravy boats	12 $\frac{1}{2}$ "
Fruit baskets	20 "

John Basten, from England, was foreman of the factory for many years. Mr. George Morgan, who is still living and now in the employ of the S. S. White Dental

¹ Mantel ornaments.

Manufacturing Company, Philadelphia, when a boy turned a wheel for one of the throwers in the old China Manufactory. His elder brother, Joseph Morgan, was a moulder in the works during the entire period of the factory's existence. Andrew Craig Walker, recently deceased, was one of the best hands employed in moulding the finer pitchers and many pieces are still preserved with his mark, a "W," scratched under the glaze. Isaac

Spiegel and Jacob Baker tended the kilns and superintended the preparation of the clays, and it is said that the former made many valuable suggestions to the proprietors of the works in regard to improvements in the construction of the kilns. Other workmen in the factory were William Hand, an Englishman, widely known among the craft on account of his diminutive stature, Thomas B. Harned, Charles Frederick and one



70.—NIGHT-LAMP DECORATED WITH
RURAL SCENE IN COLORS. MRS.
R. C. HEMPHILL.

Vivian, a Frenchman. Charles J. Boulter was also connected for some time with the establishment and William Chamberlain, a Philadelphian, was employed as one of the decorators. It is difficult, at this late day, to procure information relative to many of those connected with the establishment, as nearly all have passed away. The private marks of some of the moulders and turners are given

in our chapter on American Marks and Monograms, but other initials are frequently met with on pieces of the Tucker and Hemphill ware, which cannot now be identified.

It is impossible to set down any rules by which this ware can always be known. There are certain peculiarities of form and decoration which are easily recognized and some pieces may be identified by the private marks upon them. Many, however, which are not marked, can with difficulty be distinguished from French productions, even by the connoisseur.

Just why this venture should not have proved more of a financial success, we are unable to understand at this remote period, though it can readily be seen that the high cost of foreign skilled labor and the expensive gilding which was used so lavishly were, doubtless, important factors in the heavy losses which the promoters of the undertaking sustained. The pieces yet in existence are generally carefully preserved as heirlooms in the families of those who procured them from the manufacturers, and the few examples which, from time to time, find their way into the market are eagerly purchased by collectors, both on account of their comparative rarity and because they possess qualities which have not been surpassed by the best of imported or domestic productions.





CHAPTER IX.

THE POTTERY INDUSTRY FROM 1825 TO 1858.

A STONEWARE pottery was established in Baltimore, Md., in 1827 by Mr. Perine, who was afterwards joined by his son, Mr. T. P. Perine. At the death of the senior partner, the latter became sole proprietor. The style is at present M. Perine & Sons. They manufacture stoneware in the usual lines of useful articles, Rockingham, hand- and machine-made flower-pots, terra-cotta drain pipe and fire-clay chimney pipe. They make a specialty of fancy flower-pots and stands and hanging-baskets, in unique designs. They received the Centennial medal for superiority of goods exhibited in 1876. The trade of this house is mainly wholesale and extends throughout the Southern as well as the Northern States.

In 1831 Messrs Horner & Shirley were engaged in the manufacture of flint stoneware in New Brunswick, N. J., in which year they exhibited some of their productions at the Franklin Institute, Philadelphia.

As early as 1832, or thereabout, plain fire-brick and tile were made by the American China Factory in Phila-

adelphia, then operated by Messrs. Tucker & Hemphill. They advertised these products as being "of a superior quality, manufactured in part from the materials of which the china is composed. These have been proved, by competent judges, to be fully equal to the best Stourbridge brick," which have been celebrated for their excellence for nearly a century and a half. The fire-clays of the Stourbridge district have been used for upward of three hundred years by British manufacturers.

Isaac Spiegel, a workman at the old Philadelphia China Factory of Messrs. Tucker & Hemphill, started in business for himself in Kensington, Philadelphia, about the year 1837. He made Rockingham, black and red ware of good quality, some in ornamental shapes, such as miniature barrels, card-baskets, and Rockingham figures. Some of the machinery was moved to his pottery from the Hemphill factory on the closing of the latter, and he secured many of the moulds which had been used for making ornamental porcelain pieces. In 1855 Mr. Spiegel retired from active business, and was succeeded by his son, Isaac, who carried on the works until 1879. He made fire-brick and tiles in 1858, and later produced mantel ornaments in Rockingham, such as figures of lions and dogs. In 1880 John Spiegel, a brother of the latter, resumed the business, and a few years after made Barbotine ware, biscuit decorated with floral designs moulded separately and attached to the surface of vases. He also made vases and plaques in biscuit for decorators, but discontinued this branch some years ago. At present he is engaged in burning magnesia for the drug trade.

THE OHIO VALLEY.

Mr. John Hancock came to America from England in 1828 and commenced the erection of a pottery at South Amboy, N. J. In the following year he sent over for his wife and son Frederick, who brought with them two turners, one from Minton's named Bernard Houston, and one thrower, Charles Harrison. On the arrival of these workmen Mr. Hancock had his pottery finished and commenced at once the manufacture of yellow ware. Mr. John Hancock was a potter of large and varied experience, having served an apprenticeship at Etruria with Josiah Wedgwood. According to his son, Mr. Frederick Hancock, who is still living in Bennington, Vt., at an advanced age, he was at one time manager for Mr. James Clews at Cobridge, England, and made the colors used in decorating the wares at that factory. In 1821 he left Clews and went with Mr. Lewis Weston Dillwyn, at the Cambrian Potteries, Swansea, Wales.

In 1840, Mr. Hancock, with his son, went to Louisville, Ky., and started a stoneware pottery there. In 1841 the elder Hancock went to East Liverpool, Ohio, and engaged in the manufacture of yellow and Rockingham wares, in the building called the Mansion House, in company with Messrs. James Salt and Frederick Mear. Mr. Hancock died in East Liverpool in 1842.

Mr. Frederick Hancock, who was born in 1817, came to the United States from Hanley, Staffordshire, in the fall of 1829, and learned the stoneware trade with Mr. Israel Seymour of Troy, N. Y. In 1839 he went to Bennington, Vt., and worked in the stoneware pottery of

Messrs. Norton & Fenton for a short time. In 1840, as we have seen, he accompanied his father to Louisville. In the following year he returned to Bennington, where, in the spring of 1851, he worked in the United States Pottery. He next went to Worcester, Mass., in 1858, and established another pottery which he operated until 1877, when he sold his interest and returned to Bennington.

The Lewis Pottery Company was incorporated in Louisville, Ky., in the year 1829, for the purpose of making queensware and china, the incorporators being Robert Ormsby, James McG. Cuddy, Jacob Lewis, Edmund T. Bainbridge, and John J. Jacob. Messrs. Vodrey & Frost, who had been in business in Pittsburgh, Pa., for about two years, were induced by these parties to move their plant to Louisville in that year, and began the manufacture of a fair grade of cream-colored ware. Mr. Frost retired in two or three years, and the business was continued by Messrs. Vodrey and Lewis until about 1836, when the firm was dissolved. The dissolution was occasioned by the advent of a prominent English potter, Mr. James Clews, who, being a man of fine presence and a fluent talker, so impressed some of the capitalists of Louisville that he succeeded in forming a company with an ample capital for building and operating a new pottery at Troy, Indiana.

POTTERY AT TROY, INDIANA.

Mr. James Clews operated the extensive potteries at Cobridge, England, from about 1820 to 1829, which had

been worked since 1808 by Messrs. Bucknall & Stevenson, and afterwards by Mr. A. Stevenson. He was also proprietor of other works lying between Cobridge and Burslem, and manufactured extensively white-ware table services for the American market. Many of his now highly prized pieces were decorated with dark-blue transfer prints of American views, examples still being common in the cabinets of American collectors. Among the most familiar of these are views on the Hudson River, the Erie Canal, the "States" plate, of which I have seen nine varieties, and services embellished with a representation of the "Landing of Gen. Lafayette at Castle Garden, New York, 16 August, 1824." Perhaps no English potter was better known on this side of the Atlantic through his wares than Mr. Clews. The deep, rich coloring of his under-glaze printing was not surpassed by any other manufacturer of that day, and the mark, "Clews Warranted Staffordshire," impressed in a circle around a crown, made his name a household word throughout the States.

It is not generally known that Mr. James Clews, after the closing of his English works in 1829, came to America and took charge of a similar manufactory in the United States, yet such was the case, and this fact will add greater interest to his productions, which, having preceded him to this country, we still preserve. The town of Troy, Indiana, was selected for the location of the new works, on account of its favorable situation on the Ohio River, which furnished excellent transportation to the larger cities of the South, East, and West, and because of its proximity to the necessary materials for manufac-

turing, which had been recently discovered, of excellent quality and in great abundance. The Indiana Pottery Co. was incorporated by special act of the Legislature of January 7, 1837, the incorporators being Reuben Bates, James Clews, Samuel Casseday, William Bell, James Anderson, Jr., Edmund T. Bainbridge, Perly Chamberlin, William Garvin, John B. Bland, Jacob Lewis, and Willis Ranney. The capital stock was \$100,000, with privilege to increase to \$200,000, and the act recited that the same parties had previously been transacting business as the "Lewis Pottery Co." From the *History of Warrick, Spencer, and Perry Counties (Ind.)* we extract the following relating to this enterprise: "It was thought that the finer ware made so extensively in England could be made from the Troy clay. Reuben Bates gave as his portion of the investment a tract of about 160 acres of land, on much of which was the clay. The other members of the company furnished means to build the necessary houses and buy the necessary apparatus. Supposed experienced potters in considerable numbers were induced to come from England, as this was thought necessary to insure success to the new enterprise. . . . The pottery started up with flattering prospects, but in a short time the impossibility of making white ware from the clay was demonstrated, and after a year of anxiety and effort on the part of the company, business was suspended and the property was either transferred to, or placed in charge of, Samuel Casseday, of Louisville, who after that, from time to time, leased it to the leading workmen who had come from England, or others."

It is a matter of surprise that under Mr. Clews' management the products of the Troy works should not have proved of a higher order, since his earlier cream-colored ware and stone china, made in England, were of a superior quality. His failure in this respect can only be explained by the incompetency of his workmen and the unsuitableness of the clays which were used. The attempt to make white ware resulted only in the production of an inferior grade of pottery of a dark cream color, fragments of which have been sent to me by Mr. Benjamin Hinchco of Troy, who unearthed them in digging around the premises. The manufacture of this was soon discontinued, and yellow and Rockingham wares were substituted. I have searched in vain for pieces of print-decorated ware made by Mr. Clews in America from plates used by him in England, since it would seem reasonable to suppose that he would bring some of the old engravings, which had originally been made for the American market, with him to his new field of labor. The only style of decoration which I have been able to find on any of his American-made wares is a rudely painted border in blue, under the glaze, such as was common on the cheaper grades of white ware made at that time. Messrs. William Brownfield & Sons, who now carry on the Cobridge works in England, inform me that none of the old plates are now in existence.

After considerable money had been sunk in the Troy venture, the business was discontinued, and Mr. Clews returned to England, where he died, in 1856, at the age of about seventy. He was a remarkably sagacious and

enterprising manufacturer in his day, and at one time amassed considerable wealth, much of which he subsequently lost. His son, Mr. Henry Clews, of New York City, is well known in financial circles.

In the spring of 1839, the company induced Mr. Jabez Vodrey to move to Troy and take charge of the pottery. With what hands he could procure in Louisville, he put the pottery in operation in March of that year, and continued to run it with varying success until 1846, when, from lack of skilled labor and capital, he was forced to abandon it, and in 1847 moved to East Liverpool, Ohio.

In 1851, John Sanders and Samuel Wilson leased the Troy works from Mr. Casseday, who was then the recognized owner of the property, and continued the manufacture of yellow and Rockingham goods until 1854, when the buildings were burned down; but another pottery was soon afterwards erected on the same site. Mr. Sanders continued the business until 1863, when he died. Mr. Benjamin Hinchco then leased the property and operated the works until they were torn down, about twenty years ago.

William Ridgway, of Hanley, England, was another eminent potter who commenced operations in this country after having manufactured extensively for the American trade for many years in England. He was associated there with his brother John, under the firm name of J. & W. Ridgway, and many of the old blue pieces now so eagerly sought for by collectors, with American views, were made at the Hanley potteries. Of these, the series

entitled "Beauties of America," which included views of the Philadelphia Library, Staughton's Church, Philadelphia, Capitol at Washington, and City Hall New York, were the most familiar. William Ridgway afterwards left his brother and became interested in no less than six important potteries in England. He continued to hold the American trade by making extensively china with light blue and black prints of American scenery. Of the latter I have before me some river scenes, such as views on the Hudson, the Delaware Water Gap, the Bridge at Harper's Ferry, the Columbia Bridge on the Susquehanna (Pa.), and others. Few collectors who are familiar with the Ridgway china are aware that the younger brother, William, contemplated the removal of his manufactory to this country. He pushed his plans so far as to commence the erection of a pottery on a large scale in Kentucky, which for some reason was never completed. The ruins of the partially built walls are still to be seen near the mouth of the Big Sandy River, near the West Virginia line.

A family of German potters, whose name was Boch, commenced the manufacture of porcelain hardware trimmings on Long Island, N. Y., about 1850, which industry has since flourished to such a remarkable degree at Greenpoint. They started, at various times, several potteries and were sometime connected with the "Empire" and "Union Porcelain Works," and two different factories at Flushing. William Boch & Brother exhibited at the Crystal Palace Exhibition of New York, in 1853, stair rods and plates of decorated porcelain, plain and gilded

porcelain trimmings for doors, shutters, drawers, etc. Noah Boch, a grandson, is now connected with the knob department of the Greenwood Pottery, at Trenton, N. J.

Charles Cartlidge had a china factory at Greenpoint previous to the middle of the present century. He had been a potter in England, and was agent for the Ridgways, an English house, before he commenced potting himself in the United States. Messrs. Charles Cartlidge & Co. exhibited at the New York Crystal Palace bone porcelain tea sets, pitchers, bowls, and fancy ware, also door knobs, door plates, etc. A large curtain knob, of bone porcelain, decorated with gold, has been sent to me by Mr. W. J. Stickney, of Salem, Mass., who procured it from the stock of an old crockery shop in that town which forty years ago was a depository for American wares. It is reasonably certain that this example was made at one of these establishments on Long Island, in all probability the Cartlidge works. The body is of excellent quality, the glazing good, and the gilding evidently the work of an experienced decorator. The disk measures four inches in diameter and the stem is three and a half inches in length. Mr. Cartlidge became a prominent man in the community in which he resided and founded a church there, in which, it is said, he sometimes preached. At his death his brother William, who had been associated with him, went to East Liverpool, Ohio, where he died some years ago.

Mr. Cartlidge employed good artists to model and decorate his wares. Much of his porcelain was painted in colors and gold over the glaze. I have seen door

plates and table pieces of excellent paste with artistically grouped floral designs after nature. Among the best decorators connected with the establishment were Mr. Frank Lockett and Mr. Elijah Tatler.

In addition to hardware porcelain and table pieces, Mr. Cartlidge produced some very excellent jewelry cameos and portrait busts in biscuit porcelain. Of the latter, heads of Chief-Justice Marshall, Archbishop Hughes, Daniel Webster, and Zachary Taylor were among the best, and a diminutive bust of Henry Clay, made for a cane handle, is a beautiful piece of modeling and a striking likeness. In the possession of Mrs. Annie C. Tyndale, a daughter of Mr. Cartlidge, are some finely executed brooch medallions, consisting of miniature family portraits, ideal heads and grotesque faces in relief, and a rhyton or drinking cup in the form of a wolf's head. Work of this high order of merit, however, was not in sufficient demand in the United States at that day to insure financial success and much money was lost in the enterprise. The factory was closed in 1856 and Mr. Cartlidge died in 1860.

Mr. J. L. Jensen, who was at one time connected with the Union Porcelain Works, took the Greene Street factory, called the "Empire Pottery," which had been built some time previously by the Bochs, and commenced the manufacture of porcelain hardware fittings, electrical supplies, jugs, cuspids, etc., and is still successfully operating it.

The East Morrisania China Works of D. Robitzek, on 150th Street, near Third Avenue, New York City, formerly made porcelain door knobs and hardware

trimmings. The present products are white granite, cream-colored, and decorated wares.

In 1843, at the exhibition of the Franklin Institute, Philadelphia, two porcelain baskets, made by Messrs. Bagaly & Ford, were shown by General H. Tyndale. The judges pronounced them "a well finished article for American manufacture."

THE UNITED STATES POTTERY, BENNINGTON, VT.

Messrs. Christopher Weber Fenton, Henry D. Hall, and Julius Norton commenced making yellow, white, and Rockingham wares at Bennington, Vt., about the year 1846, in the north wing of the old stoneware shop (which had been erected in 1793 by the Norton family), operated by Messrs. Norton and Fenton. The new firm brought from England one John Harrison, who did their first modelling. Mr. Hall did not remain long in the company and after he and Mr. Norton withdrew, the style was changed to Lyman & Fenton, by the admission to the firm of Mr. Alanson Potter Lyman, a prominent practising attorney of Bennington, and shortly after to Lyman, Fenton, & Park. Rockingham, yellow, and white wares continued to be made and some creditable work in parian was turned out.

In 1849 Mr. Anson Peeler, a master carpenter, was engaged to erect suitable buildings for the company. The new quarters were finished in this year and the factory became known as the United States Pottery. Mr. Fenton took out a patent about the same time for the color-

ing of glazes for pottery. The manufacture of "Patent Flint Enameled Ware" (which was a fine quality of Rockingham, somewhat analogous to our modern so-called majolica) was added, white granite ware was made extensively, and soft-paste porcelain was produced in a small way. Artists were procured from abroad to decorate the ware, among whom was Mr. Theophile Fry, a skillful painter, who is believed to have come from Belgium or France. Mr. Daniel Greatbach, who belonged to a family of prominent English artists, went from the Jersey City Pottery and modelled some of their best pieces. The trade-mark adopted and used to a limited extent on parian pieces was a raised scroll or ribbon with the letters U. S. P. impressed, and a number indicating the pattern. This ware was decorated with raised figures in white, sometimes on a blue ground. Pieces were also frequently made after English designs. An example of this style is a graceful parian pitcher belonging to the writer, which is embellished with raised foliage and human figures on a "pitted" dark-blue ground. This is an enlarged reproduction of a syrup jug from the Dale Hall Works, England. Pieces with similar decoration are owned by Mr. G. B. Sibley, of Bennington. Mr. L. W. Clark, of the New England Pottery Co., who, when a young man, was connected with the United States Pottery, while his father, Mr. Decius W. Clark, was superintendent of the works, informs me that the "pitting" on the grounds of such pieces is done in the model with a single pointed tool, only one indentation being made at a stroke. The pit marks are made close together, covering the parts to

be colored, which presents the appearance of a thimble surface. A mould made from the pitted model, of course, carries the reverse impressions, or points. The rough or pointed surface of the interior of the mould is covered with a blue slip by means of a camel's-hair brush. Then the mould is set up and white slip poured in, as is usual in casting. The white slip attracts the blue and takes it



71.—BENNINGTON PARIAN. BLUE PITTED GROUND.

from the slip-painted sides of the mould. A group of Bennington blue and white parian is here figured, consisting of pitchers, a vase, and cane handle (Ill. 71). The blue ground varies in different pieces from a light to a dark shade, the raised decorations being pure white. The uncolored parians were generally of a grayish white color and more refined and marble-like in

tone than those with blue ground. A group is shown in Illustration 72.

Parian pitchers were usually glazed inside, while many, particularly the blue and white, were finished outside with a "smear" glaze, produced by coating the interior of the seggar, in which they were burned, with glaze, which, under the fire, vaporizes and imparts to the ware a glossy surface. Small parian and porcelain statuettes, designed



72.—WHITE PARIAN. U. S. POTTERY.

for mantel ornaments, were also made to some extent. Toilet-sets, pitchers, door plates, escutcheons, and other pieces, in white granite and porcelain, were often decorated with gold and colored designs, and with the names of customers or recipients. The group of white granite ware shown (Ill. 73) consists of a cow-creamer with gold decoration, swan mantel ornament with base edged with blue under the glaze, and water-pitcher with dark blue

under-glaze and heavy gold decorations. The latter bears the date February 28, 1858, and was one of the last pieces made at this factory. The large ornamental figure represents a girl at prayer. Mr. Charles R. Sanford of Bennington Centre was at one time connected with the U. S. Pottery, and he has preserved a number of interesting pieces made there, including two dogs of parian, several pitchers, and a Rockingham figure of a deer.



73.—WHITE GRANITE WARE. U. S. POTTERY.

In 1851, or the year following, Mr. Fenton had a large monumental piece made, ten feet in height (see Illustration 74), in four sections, the lower, or base, being composed of several varieties of clay, mixed together to produce the appearance of unpolished, variegated marble. This represented the "lava ware" made at that time. The second section was made of pottery, covered with

colored glaze, and represented the "Flint Enameled Ware." Above this was a life-sized parian bust of Mr. Fenton, surrounded by eight Rockingham columns, and the whole was surmounted by a parian figure of a woman, represented in the act of presenting the Bible to an infant. This work is said to have been designed by Mr. Fenton, but modelled by Greatbach, and was placed on exhibition at the New York Crystal Palace in 1853. It now stands on the porch of Mr. Fenton's former residence in Bennington, a monument to his enterprise and genius. I am informed by Mr. L. W. Clark that several duplicates of this monument were made, as it was at first the intention of Mr. Fenton to utilize them as stoves, but the idea was afterwards abandoned.

By quoting from Horace Greeley's *Art and Industry at the Crystal Palace, New York*, we are enabled to gain an excellent idea of the various wares produced at the Bennington factory at that time. He says: "Around this monument are displayed table and scale standards, Corinthian capitals, figures, vases, urns, toilet-sets, and a great variety of other specimens in porcelain, plain and inlaid. The pitchers in porcelain are deserving of notice, as a branch of natural industry; though not decorated beyond a gilt molding, and, therefore, not attractive as china, yet they possess the first elements of good ware—that is, an uniform body without any waving, and of well-mixed and fine materials. . . . The superiority of the Flint Enamel Ware over the English consists in the addition of silica combined with kaolin, or clay from Vermont, which, when in properly adjusted proportions, produces



74.—ROCKINGHAM MONUMENT. MADE AT BENNINGTON, VT., 1851.

an article possessing great strength, and is perfectly fireproof. Telegraph insulators in white flint are on exhibition ; this material being one of the best electric non-conductors that can be found. Various forms of insulators are in the collection. This ware has been employed on the telegraphs in the vicinity of Boston. Among these specimens is a patented form, recommended by Mr. Batchelder, which has a shoulder with a re-entering angle of forty-five degrees ; this angle causes the wind and rain to pass downward, and prevents the inside of the insulator from being wet. This enamel ware comprises a variety of assorted articles, candlesticks, pitchers, spittoons, picture-frames, tea-pots, etc. This ware has become a favorite article in New England, and possesses much merit as cottage furniture. The lava ware is a combination of clays from Vermont, New Jersey, Carolina, etc. ; composed of silica and feldspar, intermixed with the oxydes of iron, manganese and cobalt. It is the strongest ware made from pottery materials ; the glaze upon this lava ware and upon the flint ware is chiefly flint and feldspar, and has, therefore, to be subjected to such an intense heat to fuse it, as would destroy the glaze upon common crockery. The colors upon the flint ware are produced by different metallic oxydes applied on the glaze, which latter serves as a medium to float them about upon the surface, while in a state of fusion, thus producing the variegated tints.

“ The Parian ware of this Company is remarkably fine, especially in the form of pitchers. They are light in material, of graceful outline, and of two tints—one

fawn-colored, from the presence of a little oxyde of iron, and the other white, from its absence. To us the former appears the more pleasing to the eye. These are made of the flint from Vermont and Massachusetts, the feldspar from New Hampshire, and the china clays from Vermont and South Carolina. This Company has the credit of first producing Parian ware on this continent."

Some of the specimens of the above described exhibit are figured in Silliman and Goodrich's *New York Exhibition of 1853*, published by George P. Putnam. Here may be seen illustrations of examples of flint enamelled and parian pitchers and a water-cooler made by the United States Pottery Company. Another design peculiar to the Bennington factory was a large water-pitcher intended to represent a waterfall, with rocks in front and water overflowing the mouth and falling in volumes down the sides, in relief.

In 1853 the works were enlarged and six kilns of improved construction were erected. The main building of the new plant was one hundred and sixty feet long; water power was used for grinding and preparing the materials, and one hundred hands were employed in the various branches of the business. At this time the selling headquarters of the establishment were in Boston. Mr. G. B. Sibley and Dr. S. R. Wilcox, of Bennington, both of whom learned the "presser's" trade at the United States Pottery, have kindly placed at my disposal a choice series of pieces made there, a number of which are represented in these illustrations. Examples of flint enamelled ware, with mottled or variegated glaze, include a picture frame,

lion, hot-water bottle in form of a book, candlestick, and goblet vase. The stamp used occasionally on this ware was "Lyman, Fenton & Co., Fenton's Enamel, Patented 1849, Bennington," arranged in a large ellipse. A curious old Toby jug, of flint enamelled ware, with handle in form of a human leg and foot, has been deposited in the collection of the Pennsylvania Museum of Art by Miss Hannah A. Zell.



75.—FLINT ENAMELLED WARE, BENNINGTON FACTORY.

In the Trumbull-Prime collection, now on exhibition at Princeton College, may be seen a number of Bennington pieces, including two lions in flint enamelled glaze, a reclining cow, book flask, and pair of candlesticks in Rockingham, and a flattened parian vase, of old French or German form, with blue pitted ground, and white modelled bunches of grapes in high relief and handles formed of series of grape leaves.

"Scrodled" ware was made to some extent at the United States Pottery, being what Mr. Greeley calls

"lava ware," as shown in the Fenton monument. This was produced by combining different colored bodies, mixed with layers of white clay by partial "wedging." A bowl and pitcher of this ware, with impressed mark, "United States Pottery Co., Bennington, Vt.," in an ellipse, is owned by Rev. F. E. Snow, of Guilford, Conn.

Captain Enoch Wood, of South Norwalk, Conn., who was connected with the Lyman and Fenton works in 1850, states that John Lee and Enoch Barber at that time were mould-makers, and that Enoch and Thomas Moore, William and Charles Leek, John Coughclough, Stephen Pies, and Joseph Lawton worked there. Enoch Barber afterwards was a mould-maker at Kaolin, South Carolina. Most of these are now dead.

The Bennington factory was closed in 1858, and in the following year Mr. Fenton moved to Peoria, Ill., where, in connection with his former superintendent, Mr. Decius W. Clark, he established a pottery for the manufacture of Rockingham, yellow, and white wares. Mr. Fenton was born in Dorset, Vermont, and learned his trade there at a common red-ware pottery. After a career of over thirty years as one of the foremost practical potters in the United States, he died at Joliet, Ill., on November 7, 1865, at the age of fifty-nine. The United States Pottery buildings were torn down in 1870. Mr. Lyman died on May 2, 1883, in his seventy-seventh year.

I have recently seen two white parian pitchers bearing the mark "Fenton's Works; Bennington, Vermont." We have no knowledge that Mr. Fenton was at any time

sole proprietor of the works which afterward became the United States Pottery, though he may have been alone for a short time previous to his partnership with Mr. Lyman. It is possible that this stamp was used by him in some of his previous operations, and that inadvertently, or for some special purpose, it was placed on a few of the pieces made during his connection with the United States Pottery. One of the pitchers so stamped is owned by Mr. G. B. Sibley, and the other is now in the collection of the Pennsylvania Museum of Art. They are the first two shown in Illustration 72.

BEACH'S POTTERY, PHILADELPHIA.

Previous to the middle of the present century, Mr. R. Bagnall Beach established a pottery in the upper part of Philadelphia, in the neighborhood of the forks of Germantown Road and Second Street. He came from the Wedgwood Works, Etruria. In 1846 he was awarded third premium for earthenware at the Exhibition of the Franklin Institute, the judges pronouncing his ware "a good article, —well finished." He used a number of ex-



76.—O'CONNELL PITCHER.

cellent pitcher moulds, one of which was said to be a correct likeness of Daniel O'Connell, the Irish patriot, who died in 1847. According to Mr. Joseph Bailey, formerly connected with the Beach Pottery, but now with the Rookwood Pottery, Cincinnati, this portrait piece came originally from the Doulton Works, London, about 1848, and Mr. Beach made them in several sizes in yellow and Rockingham. After Beach retired from business, about 1851, Thomas Haig, of Philadelphia, procured some of his moulds, among them that of the O'Connell pitcher, which is still in use (Illustration 76).

A patent for the inlaying of pearls, gems, etc., on china and baked earthenware, was taken out by Ralph B. Beach, of Kensington, Pa., evidently the same person, in 1851, but with what result we are unable to state.

OTHER POTTERIES.

Mr. William Wolfe carried on a pottery in Sullivan County, near Blountville C. H., Tenn., from 1848 to 1856, where glazed earthenware was made. In 1875 he operated a pottery in Wise County, Va., at East Big Stone Gap, where he continued to manufacture a fine quality of hard brown pottery, or stoneware, until the year 1881. The ware produced was mostly plain, but included a few jugs, vases, etc., of ornamental form, with incised decoration, entirely devoid of coloring. Specimens of the latter are now rare, though I am informed that one or two pieces are preserved in the Exposition building at Big Stone Gap, and a few other examples are owned by persons in that vicinity.

George Walker, who was associated with William Billingsley, his father-in-law, in some of the most important ceramic enterprises at Worcester, Nantgarw, Swansea, and Coalport, came to America with his family about 1835, after the death of his partner, and about 1850 established a pottery at West Troy, N. Y., which was named "The Temperance Hill Pottery." Although in Great Britain he had been identified with the higher art movements in the porcelain factories of the above-mentioned places, and is said to have first introduced the *reverberating enamel kiln* at the Worcester works, he seems to have been content to engage in the manufacture of Rockingham ware, in a small way, on this side of the Atlantic. His principal products were tea-pots, pitchers, and toys, which he continued to make for a number of years. He died in poverty some ten or twelve years ago, at an advanced age.

The stoneware pottery now operated by Messrs. Shepley & Smith, at West Troy, was established in 1831 by Mr. Sanford S. Perry. After passing through several changes, the business has grown to considerable proportions, the staple products now being stone, ale, beer, and ink bottles, snuff jars, and the usual lines of Rockingham ware.

Mr. Moro Phillips started a stoneware pottery on the James River, Virginia, about six miles below Wilson's Landing, in 1850, on a property which he had recently acquired, on which were large deposits of suitable clay. In 1853 the works were moved to Philadelphia, at the northwest corner of Chestnut and Thirty-first streets.

Here the business was superintended by Mr. George L. Horn, who is still living in Philadelphia. Chemical stoneware was manufactured for a number of years, Wolf's jars being a specialty. The demand for this class of goods was limited in those days, and Mr. Phillips introduced the manufacture of household stoneware. He had in his employ a German, named Hermann Eger, who decorated the ware in blue underglaze designs. He had been working previously in the Gloucester China Works, and died as recently as the summer of 1891.

In or about 1862 the works were moved to Erie and Trenton avenues, where they continued, under the management of Mr. Horn, until about 1867, when they were taken to Camden, N. J., where they are still operated by the heirs, for furnishing apparatus used in the extensive business interests of the estate.

Mr. James Carr, who came to the United States in 1844, worked for the American Pottery Company of Jersey City until 1852, when he went to South Amboy and took the Swan Hill Pottery in partnership with Mr. Thomas Locker, which had been established in 1849 for the manufacture of yellow and Rockingham wares. In October, 1853, he started a pottery in New York City under the firm name of Morrison & Carr, where table services in opaque china, white granite, and majolica were made. Mr. Carr directed his efforts toward the attainment of higher standards, and his experiments resulted in the production of some artistic pieces of bone china and parian, excellent both in design and execution. For a period of about two years he continued the manufacture

of majolica, and made a large variety of ornamental designs in pitchers, vases, sardine and match-boxes, compots and centre pieces, in addition to the standard forms of useful ware. In parian he executed some good portrait busts of eminent men, and a number of fancy figures and groups. In 1888, owing to the close competition of out-of-town manufacturers, the New York City Pottery was closed and the buildings torn down. He has recently built on the premises in West Thirteenth Street, several large stores, the rentals from which, he claims, yield him better returns than potting.

The trade marks used by this factory are as follows :

1. Arms of Great Britain, monogram J. C. in centre, and "Stone China" beneath.
2. Heraldic shields of the United States and Great Britain joined.
3. Parallelogram with "Stone Porcelain, J. C." in centre.
4. Clasped hands, with "J. C." on either side, and "N. Y. C. P." below.

Mr. Carr is one of the fathers of the pottery industry in this country. He experimented extensively with clays, fuels, and materials, and had in his employ, at different times, the best modellers and decorators that could be procured.

In 1853 Messrs. Young, Roche, Toland & Co., and also Messrs. Wintter & Co. of New Jersey, were exhibitors of terra-cotta wares at the Crystal Palace Exhibition, New York City. In 1858 Lorenze Staudacher was making terra-cotta chimney tops, garden and hanging vases, and brackets for churches and private dwellings, in Philadelphia.

NORWALK, CONN.

Dr. Isaac H. Hall, of the Metropolitan Museum of Art, New York, informs me that he can remember two potteries in Norwalk, Conn., where, forty years ago, pottery knobs, hardware trimmings, and variegated glazed coat buttons were made.

At South Norwalk, Mr. L. D. Wheeler was making "mineral knobs" for doors, furniture, and shutters in 1853. These were composed of red, white, and black clays, mixed together, burned, and covered with ordinary Rockingham glaze. Several years previous to that date he had, in connection with Dr. Asa Hill, made pottery buttons, which were of a similar body and glaze. This was one of the establishments which Dr. Hall remembers. Captain Enoch Wood, who was a potter at the United States Pottery at Bennington, Vt., went to Norwalk in that year and commenced working for Mr. Wheeler, afterwards his father-in-law, and three years later, in connection with Mr. Wheeler's son, purchased the business and carried it on until 1865, when the factory was destroyed by fire. Enoch Wood, the great potter of Burslem, Staffordshire, was a cousin of Captain Wood's grandfather, and Josiah Wedgwood was related to the family. Thomas Wood, of Wood & Challinor, Tunstall, John Wood, of Stoke-upon-Trent, a china painter at Copeland's, and Hugh Wood, a noted engraver, were brothers of Captain Wood's father.

The buttons referred to were made of plastic clay and not by the "dust" or powdered clay process which was patented by Mr. Richard Prosser in England, in

1840. At first they were made in plastic moulds and afterwards were pressed in dies. Some had four perforations for the thread and others were furnished with metal shanks, examples of the latter style having been sent to me by Captain Wood. They are of two qualities, a coarse red body covered with a light brown glaze, and a fine white body with an excellent mottled glaze. The manufacture of buttons was discontinued previous to 1853.

DECORATING WORKS OF HAUGHWOUT AND DAILY.

Messrs. Haughwout & Daily had a decorating establishment in New York City forty years ago, at 561 and 563 Broadway, and employed about fifty hands in painting French china for the American market. They exhibited at the Crystal Palace Exhibition in that city, in 1853, a fine collection of decorated ware, including pitchers with salmon-colored ground and lotus leaves ; a vase with painted portrait of William Woram, a former partner in the business, presented to him by the employés ; handsome toilet sets, elaborately painted with designs differing in each piece ; dessert services ; a centre piece ; coffee cups, and plates richly decorated with landscapes, figures, flowers, etc. ; a specimen plate of a dinner service manufactured for the President of the United States, with the American eagle and blue band in Alhambra style, and a service with crimson ground and gilt decoration in varied designs. As the ware so decorated was imported, it is not now possible to identify pieces bearing the work of this firm, unless obtained through persons who procured them direct from the decorators at that time and can

vouch for their authenticity. The decoration of European pieces was frequently copied, but they did also some creditable original work.

This firm did an extensive business, in ante-bellum days, with Cuba and the Southern States. It was not uncommon for a wealthy planter to order a large service of decorated ware, with massive gilding, often in duplicate to provide against breakages.

The partnership was afterwards dissolved. Mr. Daily with a new partner opened a decorating shop on Broadway, taking with them some of the painters of the original firm. The latter subsequently started decorating works on Greene Street, where Mr. Edward Lycett joined him. Mr. Haughwout's successor removed to Great Jones Street, where he continued the business for some time.

WORKS AT GLOUCESTER, N. J.

The American Porcelain Manufacturing Company of Gloucester, N. J., was incorporated in 1854, the corporators being John C. Drake, Abraham Bechtel, George B. Keller, Peter Weikel, and Martin H. Bechtel, of Philadelphia, Pa. ; William Reiss, Sr., Gloucester, N. J. ; Matthew Miller, Jr., George Setley, and George Bockins, of Camden, N. J. It is said that experiments were previously carried on in Philadelphia and Wilmington, Del. The venture seems to have been a financial and commercial failure. Mr. Philip Hallworth, who worked at the Gloucester factory, informs me that the ware would often come from the kiln melted into a conglomerate mass, and much was destroyed in this manner and considerable

money lost. A single marked example of this ware is the only one I have seen. It is a cream pitcher, remarkably translucent and quite thin, roughly moulded with raised

designs intended to represent roses and other flowers. This bears the mark A. P. M. Co. impressed on the bottom (Illustration 77).

The Gloucester China Company, incorporated in 1857, was a continuation of the former. Jacob Sheetz, Abel Lukens, and John H. Shultz, of Philadelphia; Peleg B. Savery,

77.—PORCELAIN PITCHER, RAISED DECORATION.
AM. POR. MFG. CO., GLOUCESTER, N. J.

of Camden Co., N. J., and Abraham Browning, of Camden, were created a body politic and corporate for manufacturing and selling "porcelain, china, chemicals, drugs, and other articles of which clay, sand, and other earthy substances, form the basis or principal ingredients." A Mr. McIntire was appointed manager of the works and Mr. Scharf superintended the manufacture of the products. Mr. Edwin T. Freedley, in his *History of Philadelphia and Its Manufactures*, published in 1858, states that the company produced ware "possessing the qualities of being not only semi-transparent but very strong. The articles are such as are required in every household and the product compares favorably with the European." In reality the



quality of the porcelain was good, but the workmanship and glazing were inferior. No attempt at decoration was made, all pieces being sold in the white, except such ornamentation in relief as was derived from moulds. Although large quantities of china were made at the time, the company having practically a monopoly of the trade in Western New Jersey and Eastern Pennsylvania, few pieces can now be found that can be absolutely identified. A piece from the same mould as the one last figured, but unmarked, now in the Pennsylvania Museum, was procured from Mr. Hallworth, who has assured me that it was made at the Gloucester works about 1858. Much trouble was experienced in glazing and firing, the first ware placed upon the market being blistered and rough. Mr. Hallworth also informs me that experiments were made at one time to produce yellow and Rockingham wares, but after some three kilns had been drawn without success, the attempt was abandoned. In 1858 the company had an office at No. 17 North Sixth St., Philadelphia. It is said that large quantities of imperfect ware were dumped on the river bank at Gloucester, the broken crockery being deposited in such quantities as to gain for the spot the name of the "China Wharf." Some of the workmen employed were William Hand, Philip Hallworth, Messrs. Horseman, Lock, Lawton, and Gerard. No other marks seem to have been used excepting the private marks of the workmen, the letter C being on the bottom of the pitcher figured. The factory was closed about 1860, after which, it is stated, some of the operatives started other factories in various parts of New Jersey.

Messrs. Jones, White, & McCurdy were manufacturing artificial porcelain teeth, in 1858, at No. 528 Arch St., Philadelphia. They were then turning out one and a quarter millions a year, which were claimed to be of a better grade than those produced in Europe. The original seat of manufacture of porcelain teeth in the United States was in Philadelphia.

A porcelain factory was in operation on Germantown Road, Philadelphia, in 1858.

THE SOUTHERN PORCELAIN MANUFACTURING CO.

For more than half a century deposits of fine porcelain clay have been known to exist in the hills about half way between the city of Augusta, Georgia, and the village of Aiken, S. C., in what is now Aiken County. In 1856 Mr. William H. Farrar, one of the stockholders in the United States Pottery Co., of Bennington, Vt., went to South Carolina and established works at a small settlement called Kaolin, close to the clay banks, after first having interested a number of wealthy citizens of Augusta, six miles distant, in a scheme for producing fine white ware and porcelain. A stock company was formed, of which the Lamars, then prominent planters, and afterwards distinguished in national affairs, and Alexander H. Stevens, Esq., who, a few years later, became Vice-President of the Southern Confederacy, were members. Attracted by the extensive beds of fine kaolin in that vicinity, Mr. Farrar thought he saw an opportunity of making a fortune by erecting works close to the sources of supply. For many years the inhabitants of the surrounding district had been using this

clay for whitewashing their fences and buildings, but beyond such use it was not thought to be of any particular value. Mr. Farrar took with him from Vermont brick masons, who constructed the most approved kilns of that day, and Mr. Anson Peeler, a master carpenter, who had previously built the United States Pottery at Bennington. Potters were also procured from Vermont and other places. The works were operated the first year under the management of a newly imported English potter who, however, did not prove satisfactory. His experiments were unsuccessful and much ware was destroyed in firing. Under his administration considerable money was lost to the stockholders. During the second year, Mr. Josiah Jones, a skillful designer and competent potter, who had previously modelled for Charles Cartlidge at Greenpoint, assumed the management, and succeeded in producing some very fair porcelain and good white granite and cream-colored wares. The business did not prove a commercial or financial success, however, chiefly because Mr. Jones was limited to the use of the local clays, as Mr. Farrar, not a practical potter himself, could not divest himself of the erroneous idea that first-class ware could be made from the South Carolina clays exclusively. He allowed his manager, Mr. Jones, so little of other requisite clays that failure was inevitable. In 1857, Mr. Farrar arranged with Mr. Decius W. Clark, of the Bennington works, to take the South Carolina potteries in hand, which change took effect late in that year. In February following, Mr. L. W. Clark, now of the New England Pottery Co., went south to relieve his father, who then returned to Vermont, and the

son at once assumed charge of the preparation of bodies and glazes, the other branches of the business continuing under the general supervision of Mr. Farrar. During 1858, the works were fairly successful in the production of white granite and cream-colored wares, but at the close of that year Mr. Clark sold his combinations to the company, the transfer being made in the office of Alexander H. Stevens, and shortly after returned north.

The Kaolin factory continued, in a reasonably successful way, making table, toilet, and a general line of white ware, until after the war commenced, when, under the name of the Southern Porcelain Manufacturing Company, it is said to have gone into the extensive manufacture of porcelain and pottery telegraph insulators for the Confederate Government. Earthenware water-pipes were also made, to some extent, for the general Southern trade, until the

works were destroyed by fire in 1863 or '64. In 1860 the manufacture of the finer grades of ware was discontinued.

Examples of the products of these works are now exceedingly scarce, but through the courtesy of Dr. G. E. Mangault of Charleston, S. C., I am enabled to



78.—PORCELAIN PITCHER, MADE BY THE SOUTHERN PORCELAIN COMPANY ABOUT 1861. OWNED BY MRS. EDWARD WILLIS.

give the illustration of a white porcelain pitcher made here, which is decorated with relief representations of stalks of Indian corn (Ill. 78). The piece is ten and a half inches in height with excellent glaze, free from crazing. It belongs to Mrs. Edward Willis of Charleston, to whom it was presented while visiting the factory in 1861. Mrs. John S. Porcher, of Eutawville, S. C., daughter of Bishop Davis and great-granddaughter of Richard Champion, the eminent potter, who came from England in the last century and settled at Cam-

den, S. C., is the owner of a small parian syrup-jug, which was purchased at these works in 1859. One of the insulators, of brown stoneware, made here, has been sent to me by Col. Thos. J. Davies. It is a rather clumsy affair, marked with an impressed shield containing the inscription, "S. P. Company, Kaolin, S. C." This mark is said to have also been used to

some extent on porcelain pieces (see chapter on Marks).

The enterprise was destined to failure from the beginning. Good potters could not be induced to remain in the woods at a distance from any large town or city. The best workmen became dissatisfied with their surroundings, and returned north. Transportation of wares



79.—*PARIAN JUG. SOUTHERN PORCELAIN
Co., KAOLIN, S. C. MRS. J. STONEY
PORCHER.*

to the railroad, one and a half miles distant, was found to be expensive, and much difficulty was experienced in getting the product to market. In locating the works the projector lost sight of the fact that clay is a small item in the total freight expenses of a pottery. It is said that much money was lost in the venture, the amount being placed as high as \$150,000. Some of the ware, however, was of excellent quality. Rockingham pitchers and spittoons of ornate form were made in the earlier days, and cream-pots, pitchers, etc., in white ware and porcelain, with raised leaves and imitation of wicker or basket work, were made to some extent at a later date. The pitchers of this character were quite popular, and were produced in great numbers.

The Kaolin factory was probably the only one in the South, during the Civil War, which produced white or porcelain ware. Some china was imported by the Confederate Government from England, however, decorated to order, such as the table service used on board the warship *Alabama*, which was embellished with a central design consisting of two crossed cannon behind an anchor, above the initials C. S. N. (Confederate States Navy). Around this device is a circle of cable, outside of which is a wreath, formed on one side of a spray of leaves and flowers of the tobacco plant, and on the other of the cotton plant, with leaves, flowers, and cotton bolls. Below the design is the motto of the *Alabama*, "Aide Toi et Dieu t'Aidera." Each piece is bordered with a blue band. This service was made by the firm of E. F. Bodley & Co., of Burslem, England. The body of the

ware was "Ironstone China." Mrs. Annie Trumbull Slosson, in *The China Hunters Club*, states that there were three sets of this china, each of a different color, one of which was printed in a gray tint, for use at the officers' table. Examples of this service are owned by Mrs. King of Atlanta, Georgia, one of which is decorated in a blue-gray tint, and others in green, with the same finish of blue lines.

At the close of the war, in 1865, a new porcelain company was organized, with Mr. R. B. Bullock, afterwards Governor of Georgia, president. He prosecuted the business with great vigor, but this second attempt proved abortive, and after twelve years of varying success, the pottery was sold to Messrs. McNamee & Co., of New York. The old kilns and buildings have long since disappeared, but the clay is still being mined and shipped in its crude state to the north and west, where it is used extensively by the paper trade. There are at present four mines in active operation here, that of Messrs. McNamee & Co., and another, worked by Col. Thomas J. Davies, being the most important. The clay is of the finest quality, much too fine, it is claimed, for use alone in the manufacture of pottery, but admirably adapted to the manufacture of wall papers. In 1891 about 20,000 casks of clay were shipped from these mines.

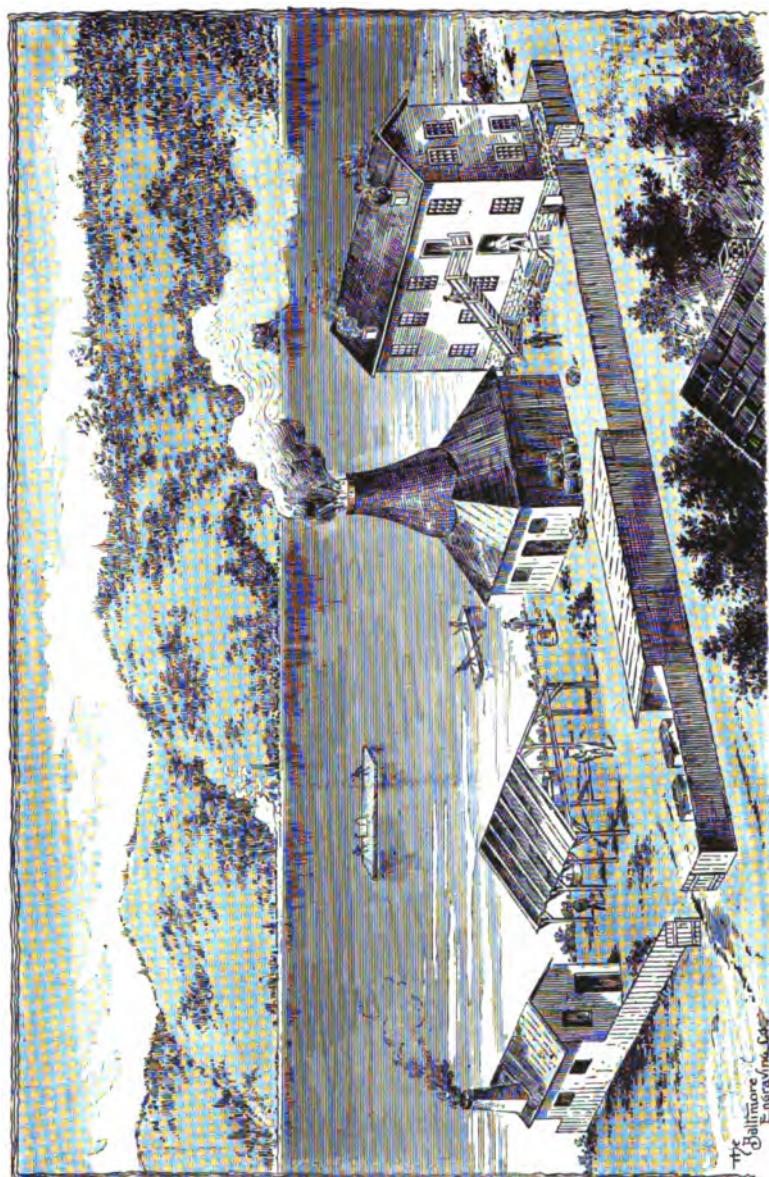




CHAPTER X.

EAST LIVERPOOL, OHIO.

THE history of East Liverpool is, in a great measure, the history of the pottery industry in the United States. Mr. James Bennett, the first to engage in the pottery business there, came from Newhall, near Woodville, a pottery district in Derbyshire, England, in the year 1834, and found employment at the Jersey City Pottery, which, at that time, was one of the foremost establishments of the kind in the United States, where he remained until about 1837, when he went to Troy, Indiana, at which point some Louisville (Ky.), gentlemen had recently established works for the manufacture of white ware, under the name of the Indiana Pottery Co. After remaining there for about a year, Mr. Bennett was forced to leave, on account of ill-health, and proceeded up the Ohio River with the double purpose of improving his health and selecting a more suitable location for the establishment of a pottery. At East Liverpool he found clay of the proper quality for yellow ware, and here, in 1839, he built a small pottery, with the assistance of Mr. Anthony Kearns, who furnished the necessary means. This was the pioneer pottery in that section, which has



80.—THE OLD BENNETT POTTERY, EAST LIVERPOOL, O.

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TH.
J. Ballmore
Photographic Co.

since become one of the greatest centres of the pottery industry in the United States. After paying Mr. Kearns a portion of the profits for the use of the plant for a short time, Mr. Bennett leased the works for a period of five years. In April of 1841 he sent to England for his brothers, Daniel, Edwin, and William, all practical potters, who shortly after started for America, reaching East Liverpool in September of that year, when the four entered into a co-partnership under the style of Bennett & Brothers. In connection with yellow ware they immediately commenced the manufacture of Rockingham ware, the first to be made in the United States, and some of their patterns which were originated at that time, notably the octagon-shaped spittoons, are still in demand, after fifty years of uninterrupted popularity.

For the next three years the business increased steadily, the products of the factory being sold to the wholesale crockery merchants of Cincinnati, Louisville, St. Louis, Cleveland, and other western cities. The lack of proper facilities for shipping goods, however, induced the firm to look around for a more favorable location, and accordingly in 1844 they decided to move their plant to Birmingham, now a part of Pittsburg, Pa., where, at that period, better coal and cheaper transportation to the eastern as well as the western trade centres could be procured. In this year they erected a larger plant at that point and the business was resumed with greatly increased facilities. Samples of their Rockingham and yellow wares were exhibited at the American Institute, New York, and the Franklin Institute, Philadelphia, from both of which they

received medals for superiority of manufacture. At the exhibition of the latter, held in 1846, their display of earthenware took the first premium, a silver medal, and was pronounced by the judges to be superior to the English. An eight-sided glazed "tortoise-shell" pitcher, with Druid's head beneath the lip, one of the pieces then exhibited is still preserved in the cabinet of the Institute. In this year Mr. Edwin Bennett withdrew from the firm, after having selected Baltimore, Md., as the field for his future operations, and here he erected a small pottery, the first to be established south of what was known as the Mason and Dixon line, for making the finer grades of ware. About two years after, he admitted his brother William to partnership, and the firm became E. & W. Bennett, and so continued until the spring of 1856, at which time the latter retired from active business on account of failing health. During this period silver and gold medals were awarded the firm by the Maryland Institute for "superiority of Queensware," the exhibits consisting of yellow and Rockingham, sage and blue-colored hard-body wares, such as coffee-pots, pitchers, water-urns, vases, etc. Since 1856 Mr. Edwin Bennett has carried on the business alone. In 1869 he enlarged the factory and more than doubled the output, and the manufacture of white ware was commenced. Shortly afterwards a decorating department was added. Mr. Bennett originated and first made the "Rebekah" teapot in 1851, in Rockingham ware, and has continued its manufacture to this day, the demand for it being regular and constant. So popular has this pattern become that nearly all the

other potteries in the United States have copied it. On opposite sides of the vessel is a figure of a maiden in

relief, with water jar, resting or standing by a well, and beneath are the words "Rebekah at the Well." The design is familiar to nearly every one, and may be seen in any crockery store. A few years ago Mr. Bennett devoted some attention to the pro-



81.—SAGE-GREEN MARINE PITCHER.
E. & W. BENNETT, 1853.

duction of parian and Belleek wares. A small quantity of the egg-shell china was made in 1886, of excellent quality, in tea sets, but as its manufacture would have interfered with the general business of the works, it was discontinued.

In 1887 Mr. Bennett produced some parian plaques which were modelled by Mr. James Priestman, an artist of ability in that line.

In 1890 Mr. Bennett changed his business into a corporation, under the style of the Edwin Bennett Pottery Co. With Mr. Henry Brunt as manager they commenced the manufacture of high-grade dinner, tea, and toilet ware in American porcelain. Their shapes are characterized by correct designs and refined decorations. Especially worthy of mention are their underglaze decorations

in old blue and gold. Another specialty is the manufacture of *jardinières* in colored glazes. These they make in a variety of forms, with ornamentation in relief. A deep ultramarine blue and an olive-green are particularly fine, while the modelling shows decided originality and merit.

The trade-mark is a globe, showing the western hemisphere, with a sword driven through the United States. The guard of the sword carries the initials of the company, while underneath is their motto.

Mr. Edwin Bennett was born in the year 1818, and has been identified with the pottery industry from his



82.—RECENT PRODUCTIONS OF THE EDWIN BENNETT POTTERY CO.

youth, and in this country for upwards of half a century. In 1890 and 1891 he was the honored president of the United States Potters' Association.

Mr. Bennett's display of historical wares at the Chicago Fair was the only one of the kind in the American section.

This included pieces produced in the earlier years of the pottery's existence such as a large Rockingham vase with cover and dolphin handles and raised grapevine decoration, made by him in 1853; a majolica bust of Washington, by E. & W. Bennett, 1850; a pair of mottled majolica



83.—MR. EDWIN BENNETT.

vases, two feet in height, with raised grapevine designs and lizard handles, produced by him in 1856; enormous octagonal majolica pitcher, with blue, brown, and olive mottled glazes, 1853; coffee-pots, and other pieces in blue, green, and olive bodies.

One of the most striking pieces of his more recent

work is a large majolica *jardinière*, three feet in height, consisting of a trefoil basin supported by three griffins. This was designed and modelled by Mr. Herbert W. Beattie of Quincy, Mass., and is produced in robin's-egg blue, lemon, and other colors.

After Bennett & Brothers left East Liverpool, in 1844, for Pittsburgh, the old Bennett Pottery was rented for several years by Samuel, Jesse, Thomas, and John Croxall, the latter being the only one now living, who is the senior member of the present firm of John W. Croxall & Sons, who are still making the same class of goods originally made by the Bennetts,—Rockingham and yellow wares. The old buildings were afterwards washed away by the encroachment of the river.

Mr. Benjamin Harker, Sr., established a pottery in East Liverpool in 1840 for the production of similar wares. This was in operation for a number of years when the business came into possession of George S. Harker, son of Benjamin, and carried on under the name of George S. Harker & Co. until his death, many years ago, after which his widow and two sons, William W. and Henry N., continued it under the same style until 1890, in which year it was incorporated as The Harker Pottery Company. In 1879 the manufacture of Rockingham and yellow wares was discontinued, and white granite ware is now made exclusively, the plant having been greatly enlarged in recent years. Many of the proprietors of other establishments in East Liverpool and elsewhere learned their trade at this factory. Mr. James Taylor, who died a few years ago at Trenton, N. J., was at one time a

partner in the concern, and was afterwards largely instrumental in expanding the industry in the latter city.

Mr. John Goodwin, who worked in the pottery of James Edwards, Dale Hall, Burslem, England, came to America in 1842, and immediately after his arrival went into the employ of James Bennett & Bros. In 1844, Mr. Goodwin embarked in the business on his own account, and with one small kiln began to make yellow and Rockingham goods, with eminent success. In 1853, owing to ill health, he sold the business to Messrs. Samuel and William Baggott, and lived in retirement until 1863, when he erected the Novelty Pottery Works, now operated by the McNicol Pottery Company, who have added the manufacture of C. C. ware. In 1870, Mr. Goodwin went to Trenton and purchased an interest in the Trenton Pottery Company, when the style was changed to Taylor, Goodwin, & Co., manufacturers of iron-stone china, C. C. and sanitary and plumbers' earthenware. Desiring to be again with his old friends in Ohio, however, Mr. Goodwin sold out his interest in 1872, and, returning to East Liverpool, purchased the Broadway Pottery from Messrs. T. Rigby & Co., and immediately began to improve the works with a view to adding white ware to the products. The realization of these plans was, however, delayed by Mr. Goodwin's death in 1875, but in the following year the business was resumed by his three sons, and the new firm, under the name of Goodwin Brothers, has since enlarged the works, and continues to manufacture pearl-white, cream-colored, and decorated wares of an excellent quality.

Messrs. Salt & Mear went to East Liverpool and commenced making yellow and Rockingham wares, in the building called the Mansion House, in 1841.

Messrs. Woodward & Vodrey began business in the spring of 1848, and were burned out in March, 1849. They then associated with them John S. and James Blakely and Richard Booth, under the firm name of Woodward, Blakely, & Co., and rebuilt the works during the summer of 1849. The experienced potter of the company was Jabez Vodrey, who, in company with a Mr. Frost, came to this country in 1827 and built and operated a pottery at Pittsburgh, Pa. The firm of Woodward, Blakely, & Co. continued to enlarge their works until they had one of the largest potteries in East Liverpool, their products being yellow and Rockingham ware of the finest quality. Their plant occupied the ground upon which three potteries now stand,—those of Wm. Brunt, Son, & Co., George Morley & Son, and Vodrey & Brother. The year 1857, however, carried the firm of Woodward, Blakely, & Co. down in the financial panic which stranded so many mercantile houses.

THE KNOWLES, TAYLOR, & KNOWLES CO.

In 1854, the works now owned by The Knowles, Taylor, & Knowles Company were established. The business was started in a small way by Isaac W. Knowles and Isaac A. Harvey, who made yellow ware in a single kiln, which was used alternately for bisque and glost-ware. A few years later Rockingham ware was added to their products.

In 1870, Mr. Knowles, who had purchased the interest of his former partner, was joined by Messrs. John N. Taylor and Homer S. Knowles, and in 1872 they commenced the manufacture of ironstone china or white granite ware. Since then they have rapidly enlarged their works to enable them to fill the orders which came to them from every State in the Union. At the present time their plant includes thirty-five kilns used in the manufacture of white granite ware and china and for decorating, and covers ten acres of ground. Their vitreous-translu-



84.—THIN CHINA TÊTE-À-TÊTE SET. K., T., & K. CO.

cent hotel china is made in large quantities for the trade and is of a superior quality. About seven hundred hands are employed.

In 1888 Messrs. Joseph G. Lee and Willis A. Knowles were admitted to the firm, and in January of 1891 a stock company was formed and incorporated under the title of The Knowles, Taylor, & Knowles Company, with a paid-up capital of one million dollars. Previous to the disastrous fire of November 18, 1889, which burned their china works to the ground, a considerable quantity of Belleek

china was made, but since the rebuilding of the works that branch has been discontinued. Little was attempted in the production of art ware, however, until a recent date, because the marvellous growth of the business and ever-increasing demand for staple products taxed the producing capacity of the factory to the utmost. They are now turning out some good things in fine bone china of a more ornamental character, and indications point to an early revival of a high order of decorative work. Among their recent achievements are a number of excellent designs in extra thin china, which is beautifully translucent and of dazzling whiteness. This is sold both plain and decorated. At present they are producing quite a number of elaborate and expensive decorations, and have twelve decorating kilns.

The mark used on vitreous hotel china and thin art ware consists of the initials of the company above the word "china," thus : K., T. & K.
CHINA, and that used on their



85.—DECORATED THIN CHINA CHOCOLATE POT.

K., T., & K. Co.

white granite ware is an eagle enclosed in a five-rayed badge, as here shown.

The Knowles, Taylor, & Knowles Co. have produced some highly artistic pieces for exhibition at the Chicago Exposition. Especially worthy of notice are two vases. One of these is a nine-inch piece, made of the peculiarly translucent bone china body with soft, velvety glaze, which is designated by the manufacturers "Lotus" ware. The entire exterior surface is covered with an underglaze mazarine



blue of a rich tone. On one side is a figure of Cupid chasing a bird and on the other Cupid driving a pair of butterflies. While the subjects are not new, the treatment is original, the figures being executed in white Limoges enamel built up *over* the glaze instead of *under* it, as in the *pâte-sur-pâte* method. The effect is particularly pleasing. The neck of the vase is decorated in raised coin-gold after



86.—SMALL VASE, RELIEF DECORATION.
EXHIBITED AT CHICAGO FAIR.

the Renaissance style, while the handles are solidly gilded and chased.

The second piece referred to is a large vase, which stands thirty and three quarters inches high, mounted on a pedestal twelve inches in height. Owing to the large size of the vase the body employed is that of the regular hotel china made by this firm. The ground color is a



87.—**LARGE VASE, BLUE GROUND, GOLD DECORATION. CHICAGO FAIR.**

rich mazarine blue applied under the glaze. Flowers in relief coin-gold of various tints are applied to the surface, representing petunias, and on the side of the piece is an excellently painted pair of golden partridges. The neck of the vase and the pedestal are embellished with solid, raised gold borders in the Renaissance style.

Particularly noteworthy in their Chicago exhibit were some exquisite pieces of "Lotus" ware, decorated in dainty colors, and several vases with jewelled decoration and open-work effects.

Col. John N. Taylor, the president of the company, was born June 23, 1842, near Port Homer, Jefferson County, Ohio.



88.—COL. JOHN N. TAYLOR.

In 1849 he came, with his parents, to East Liverpool, Ohio, where he has since resided. In 1861 he enlisted in the Union army as a member of Battery "B," known as "Cooper's Battery," First Pennsylvania Light Artillery, and afterward became Second Lieutenant of Company

"I," 143d Regiment, O. V. I. He was appointed postmaster at East Liverpool in 1864. In 1868 he connected himself with the pottery business, and, as we have seen, in 1870 became a member of the firm of Knowles, Taylor, & Knowles. On the incorporation of The Knowles, Taylor, & Knowles Company, he became its first president, and has since continued to occupy that position. He is also vice-president of The Knowles, Taylor, & Anderson Co., a corporation with a paid-in capital of a half million dollars, organized for the manufacture of sewer pipe and other clay products at a large plant in the East End, a suburb of East Liverpool. Stilts, pins, saggers, and other potters' supplies are also made by this company at the works known as The Potters' Supply Co.

Col. Taylor's life has been a busy one, and to his personal efforts are due, to a large degree, the bringing of the establishments with which he has been identified to their present high place in the business world. He was appointed chairman of the Committee on World's Columbian Exposition, appointed by the U. S. Potters' Association.

Col. Taylor has long been a warm personal friend of Gov. William McKinley, dating back to the time and before the "Little Major" entered the halls of Congress, and upon his elevation to the gubernatorial chair in Ohio the Governor appointed him a member of his staff, with the rank of colonel.

OTHER EAST LIVERPOOL WORKS.

Henry Speeler, a German, was one day wandering along the river bank near the Harker Pottery, when he

became engaged in conversation with a laborer who was employed there. The former applied for and was given employment, and proved to be an excellent thrower. Later he sold ware through the country, and after accumulating some money, associated himself, about 1858, with William Bloor and James Taylor, the latter having been at one time a partner of George S. Harker, under the firm name of Harker & Taylor. This partnership, however, was after a time dissolved, and Mr. Speeler then built the original part of what is now known as the International Pottery in Trenton, N. J.

The works of Messrs. C. C. Thompson & Co. were established in 1868 by C. C. Thompson and J. T. Herbert. Two years later the dry-goods firm of Josiah Thompson & Co. purchased the interest of the latter, and the firm became C. C. Thompson & Co., composed of Josiah Thompson, the father, C. C. Thompson, J. C. Thompson, and B. C. Simms. After the death of Mr. Josiah Thompson, in November, 1889, the firm was incorporated, and is known now as the C. C. Thompson Pottery Company, and the establishment is among the largest producers of yellow and Rockingham wares in this country. In 1884 the plant was increased and the manufacture of C. C. ware commenced. In 1890 a decorating department was added, which is now an important factor in the business. The trade-mark used on the semi-granite wares of this factory is here given.

Among the first attempts to produce artistic commercial ware in East Liverpool were some underglaze stone-



ware cups and saucers made at the works of Mr. Homer Laughlin (formerly Laughlin Brothers), and decorated by Mr. Edward Lycett in 1879. Some toilet sets exhibited by Mr. Laughlin at the World's Columbian Exposition have been much admired. They are decorated with raised designs in dull gold and dark coloring on tinted grounds, and are of novel and graceful forms.

The Dresden Pottery Works of the Potters' Co-operative Company were established in 1876, of which Mr. H. A. McNicol is president. They produce ironstone china and decorated wares in table and toilet services. The decorations are particularly praiseworthy.

Messrs. Cartwright Brothers manufacture, at their Industrial Pottery Works, C. C. goods, plain and decorated, and specialties in ivory decorated ware.

The Standard Pottery Company are manufacturers of ironstone china and decorated wares in the usual lines.

Messrs. Wallace & Chetwynd commenced business about 1882 and are now making a high grade of opaque china, American stone china and decorated goods. Mr. Joseph Chetwynd learned the business in his father's pottery in England, and was for several years employed as manager and modeller by Messrs. Cockson & Chetwynd of Staffordshire.

Messrs. Rowe & Mountford have for a number of years been engaged in the manufacture of stilts, pins, and spurs, and in 1891 added a china department, and are now producing vitreous translucent hotel ware.

The American Pottery Works of Messrs. Sebring Brothers & Co. were established in 1887. They make

white granite and decorated wares for the jobbing trade in dinner and tea services.

Among the other important establishments in East Liverpool are the Riverside Knob Manufacturing Co. of Henry Brunt & Son ; Burford Brothers ; Burgess & Co., makers of bone china, staple, and fancy goods ; J. W. Croxall & Sons, successors to Croxall & Cartwright ; the Eagle Pottery Works of S. & W. Baggott ; Great Western Pottery Works of John Wyllie & Son, established in 1868 ; Globe Pottery Co. ; Novelty Pottery Works of McNicol, Burton & Co. ; R. Thomas & Sons, hard vitreous porcelain electric goods ; the American Stilt Works, and E. M. O'Connor, maker of saggers and fire-brick.

East Liverpool is distinctively a pottery city and nearly half of its inhabitants are interested in some manner in the pottery industry. At the present time it has twenty-nine potteries, nine decorating works, two stilt and triangle manufactories, one sagger factory, and three establishments for the manufacture of door-knobs. It enjoys the distinction of being the oldest important centre of the pottery industry in the United States and of producing the men who established many of the most successful potteries in every section of the country.





CHAPTER XI.

TRENTON, N. J.

THE pottery industry, which has reached such a marvellous growth in Trenton as to gain for that city the title of the "Staffordshire of America," had its actual beginning there in 1852, when Messrs. Taylor and Speeler commenced the manufacture of yellow and Rockingham wares. At the present time the establishments engaged in Trenton in the production of all grades of ware, from common pottery to majolica, and from white granite to the finest porcelain, both plain and decorated, number thirty-seven, having the capacity of producing in value about five million dollars' worth of wares per annum. The central location, superior railway, canal, and river transportation facilities, and close contiguity to the clay deposits of New Jersey, have all contributed to the concentration and enormous development of the manufacture at this point. Interesting as is the subject to the ceramic student, we must of necessity confine ourselves to a review of the history of the most important and representative of these establishments.

We can but briefly allude to the difficulties encountered by the early potters in seeking the various clays necessary

for the production of white wares, as well as the feldspar and flint required in the manufacture of these goods. It must be remembered that no mines, except of the common New Jersey fire-clays, had been developed at that time. Many thousand miles were travelled by the first potters of Trenton in search of suitable kaolin. The first deposit was found near Hockessin, Delaware, and was known as the Graham mine. This afterwards changed hands and several other mines were developed in that section, the most notable being that operated by Israel Lacy. Another deposit was discovered a few years later at Brandywine Summit, Delaware County, Pa., and worked by the National Kaolin Company. This clay was probably the best used in the early years of the industry and is still largely in demand. The first flint used in Trenton for the production of white ware was picked up in Pennsylvania and in different places near Trenton, wherever a piece could be found on the surface. Later, the vast quarries of Harford County, Maryland, on the Susquehanna, were discovered, and the bulk of this material has come from that section. The first feldspar mines operated were in Connecticut, near Hartford. A number of mines have since been developed in that State, in Maine, Pennsylvania, and Maryland, and kaolin deposits of fine quality are at present in course of development in North and South Carolina, Florida, and various other sections of the country. When it is realized that the clay and mineral mines of England have been worked for perhaps three hundred years, while in this country the raw materials have not been developed in a systematic way until within the past forty years or so,

we can more fully appreciate the obstacles which our potters have surmounted in bringing the industry to its present condition. Until a comparatively recent period each pottery manufactured the same class of wares, white granite and C. C. or cream color, and in a very limited way decorated toilet ware. Of late there has been a great diversification and specialization of the business, so that now a number of manufactories produce sanitary and plumbers' earthenware exclusively; others make nothing but vitrified china, while some confine their productions to semi-porcelain and white granite, and a few have embarked in the manufacture of the finer grades of porcelain. To all of these establishments extensive decorating departments have been added.

The Glasgow Pottery was established in 1863 by Mr. John Moses, who has ever since been prominently identified with the pottery business in Trenton. He was born in County Tyrone, Ireland, in 1832, and came to the United States at the age of twenty. He first served an apprenticeship at the dry-goods business in Philadelphia, where he acquired a practical business training. In the year first mentioned above, he rented a pottery with two small kilns that had been used for making yellow and Rockingham wares, and immediately commenced the manufacture of cream-colored ware, shortly afterward extending the business to the production of white granite or ironstone china. At the time he introduced decorations on table and toilet sets there was only one man in Trenton who understood this branch of the art, who did all the decorating for the ten potteries then in operation. The first ornamentation

attempted was the application of plain color bands, then gold lines, and by a gradual development the more elaborate decorations were finally introduced. The capacity of the factory was increased as the growth of the business required, and in a short time Mr. Moses was successfully making wares fully equal to any made by the practical



89.—MR. JOHN MOSES.

English potters who were his competitors in Trenton. His present productions are dinner, tea, toilet, and decorated wares of every description. The name of the Glasgow Pottery is widely known throughout this country in connection with the John Hancock cups and saucers used at the Centennial Tea Parties, which were made exten-

sively just previous to the Exhibition of 1876. Mr. Moses is also a large producer of white granite and cream-colored wares, thin hotel and steamboat china of excellent grades, and has always taken an active part in upholding the protective tariff on American crockery before the Ways and Means Committee of Congress.

THE ETRURIA POTTERY.

The Ott & Brewer Company, of Trenton, N. J., now operate the factory which was built by Messrs. Bloor, Ott, & Booth, in 1863. Mr. John Hart Brewer, president of the company, entered the firm in 1865, and, being an artist himself of considerable ability, soon made his influence felt in the improvement of methods and elevation of standards. Until 1876 the chief products of this factory consisted of white granite and cream-colored ware.

The first attempts in the manufacture of "Belleek" egg-shell china were made by Mr. Brewer in 1882, in conjunction with Mr. William Bromley, Jr., but these early trials were not entirely satisfactory. Encouraged by partial success, however, Mr. Brewer induced Bromley to send for his father, William Bromley, and his brother, John Bromley, who, with two or three other hands, came over in the following year from the Belleek factory in Ireland. Mr. William H. Goss, of Stoke-on-Trent, invented this body some thirty years ago, at which time the elder Bromley was acting as his manager. Messrs. David McBirney and Robert Williams Armstrong were then attempting to make first-class ceramic goods at their recently established manufactory in the village of Belleek,

county of Fermanagh, Ireland. Mr. Armstrong induced Bromley to take a number of Mr. Goss' best workmen to Ireland and introduce the egg-shell porcelain there. The ware produced at that factory has since become world-famous, being characterized by extreme lightness of body and a beautiful, lustrous glaze.



90.—BELLEEK VASE, JEWELLED DECORATION.
OTT & BREWER COMPANY.



91.—BELLEEK VASE,
OTT & BREWER COMPANY.

The ware now manufactured by the Ott & Brewer Company at the Etruria Pottery is made entirely from American materials, and is a vast improvement over the body and glaze first introduced by the Bromleys ten years ago. The rich iridescence of the nacreous glaze is fully equal to that of the Irish Belleek which is produced from salts of bismuth colored with metallic oxides; in delicacy of coloring and lightness of weight the Trenton ware is even

superior. A dozen cups and saucers, making twenty-four distinct pieces of the ordinary size, almost as thin as paper, weigh just one pound avoirdupois, or an average of only two thirds of an ounce each. A large variety of forms of this porcelain are produced, in both ornamental and useful designs. The larger vases are usually simple in outline and of the same comparative lightness as those of smaller size. They often possess pierced necks, feet, and handles, and are elegantly decorated in enamels, gold relief, and chasing.

A triumph of the potter's skill is a Belleek ostrich-egg *bonbonnière*, in two segments, which is exquisitely perforated or honey-combed over its entire surface.



92.—WHITE GRANITE JARDINIÈRE. OTT & BREWER COMPANY.

Illustration 91 represents a large vase of the "Bourne" pattern, decorated in raised gold and colors. The shape is graceful and the decoration is exceedingly artistic.

In addition to art porcelains, this factory produces a great quantity of granite ware and opaque china, in dinner, tea, and toilet sets, which are both print-decorated and hand-painted. A *jardinière* of white granite, which is here figured, is a refined example of artistic decoration in quiet tones (Ill. 92).

In presenting a biographical sketch of Mr. Brewer, we cannot do better than quote from the *Pottery and Glass-ware Reporter*, of June, 1891 :

"In 1873 Messrs. Ott & Brewer bought out the interest of Mr. Bloor, who removed to East Liverpool, where he subsequently died. The young member of the firm, then in his twenty-ninth year, filled with enthusiasm for his business and inspired with the patriotic sentiments pervading the preparation for the 1876 Centennial Exposition, at once began to show the possibilities of his craft, and the result was a showing at Philadelphia that was a revelation both to the American people and their foreign competitors. In the preparation and organization of the American pottery display, Mr. Brewer took an active and leading part, and subsequently took a prize at the Paris Exposition, where he also exhibited. About this time he first manufactured vitrified hotel china, and several specimens still in his possession testify to its excellent quality. It was, however, left to others to make its manufacture a commercial success. Mr. Brewer, like the early potters of the English and French schools, has been more interested in achieving practical success than in making money, and, as a consequence, is not as wealthy as some of his more conservative contemporaries. He has spent many

thousand dollars in arriving at the present stage, and the American industry generally has shared in its benefits.

"The United States Potters' Association, which has done much to unify, strengthen, and advance the pottery interests of this country, was suggested and successfully organized by Mr. Brewer, who was for some years its



93.—HON. JOHN HART BREWER.

secretary, and subsequently became its president. His familiar face is seen at every convention, and it is hard to tell when he is at his best, in the serious discussions of the convention, or when, as toastmaster at the banquet, the speakers are introduced with witty and appropriate remarks.

"In 1875 he was elected to the New Jersey House of Assembly in a district that usually went Democratic, and subsequently became a Representative in both the 47th and 48th Congresses, where he speedily became recognized as one of the most intelligent exponents and advocates of the tariff question, and gained a national reputation.

"Mr. Brewer is a thoroughly practical potter, familiar with all the details of the industry, acquainted with all its ups and downs during the past twenty-six years, and always taking an active interest in anything relating to its advancement. In the recent efforts to cultivate the spirit of practical art by offering prizes to the various art schools he has been prominent. His genial manners and kindly disposition have endeared him to all he has come in contact with, and even in the heat of political strife he has commanded the respect and friendship of his opponents. No employer is more popular among his employees, and no manufacturer more respected among his colleagues.

"Mr. Brewer was born in Hunterdon County, N. J., March 29, 1844, and is a lineal descendant, on his mother's side, of John Hart, one of the signers of the Declaration of Independence."

A short time previous to the Centennial Exhibition, Mr. Isaac Broome, an American sculptor, who had already gained considerable reputation as an artist of ability, was engaged by Messrs. Ott & Brewer to design and model a series of works in parian for that occasion. These at-



94.—BASE-BALL VASE. MODELLED BY BROOME.

tracted much attention, both on account of their originality of form and artistic treatment. A tea set, ornamented with raised designs and portrait busts of General and Mrs. Washington, was particularly noteworthy. His "Fashion" vases, embellished with figures in low relief, illustrate the styles of the last and present centuries. They are unique in form and, like all of Prof. Broome's work, characterized by conscientious attention to detail and careful finish. One of the most spirited designs of the series is the base-ball vase (Ill. 94), which was suggested by Mr. Brewer and worked out by Mr. Broome. It is suggestive throughout, in all of its harmonious details, of the American national game. From a pedestal rises a grad-



95.—PASTORAL VASE AND BRACKET. MODELLED BY BROOME.

ually tapering vase, of which the lower portion is formed of a series of bats banded together by a strap, while the upper portion is embellished with figures of ball-players in low relief. The cover represents a base-ball, surmounted by the American eagle, and around the projecting ledge of the base are arranged three players in life-like attitudes. The modelling is faultless and the figures are full of action.

A pastoral vase, by the same artist, is no less meritorious, though of an entirely different character. The rustic decoration, in low relief, is well suited to the form, and the goat's head handles are in keeping with the other ornamental details. A faun's head bracket, of classic conception and excellently modelled, forms an appropriate support for the vase (see Ill. 95).

Probably the most pretentious piece of work which Prof. Broome has done for the Etruria Pottery is the parian bust of Cleopatra (Ill. 96). This alone would be sufficient to place him in the front ranks of American sculptors, and is one of a large number of heads which have been modelled by him. Busts of public men have been made from life or the best portraits obtainable, and are faithful likenesses of the originals. The parian ware of the Etruria Pottery is soft and mellow in texture and a close imitation of the finest statuary marble.

THE BURROUGHS AND MOUNTFORD COMPANY

commenced business in Trenton, in 1879, in what was formerly the Eagle Pottery. Their specialties are vitrified, thin, and hotel china, decorated table and toilet sets,

and underglaze printing on pottery and porcelain. The mechanical application of decorations is the distinguish-



96.—*PARIAN BUST—CLEOPATRA. BY BROOME.*

ing characteristic of one line of their art potteries, which, while closely imitating the more expensive methods of

hand-painting, enables them to produce highly artistic effects at a greatly reduced cost. The bold ornamentation of their *jardinières*, umbrella-jars, punch-bowls, and



97.—VASES. BURROUGHS & MOUNTFORD CO.

vases, after the Doulton, Royal Worcester, Limoges, and Adderley methods, bears a striking individuality of its

own. Probably their most beautiful pieces are those on which raised gold designs are applied by hand to an exquisite mazarine blue. One of the finest examples of this class is a large vase thirty-six inches in height, with silver and gold raised paste work, on a solid blue ground, executed by a Japanese artist. The accompanying illustration shows this piece mounted on a four-inch pedestal, between two vases of ordinary size (Ill. 97).

White tiles of a fine quality, with underglaze blue printed devices, as well as embossed and enamelled art tiles, are also made here to some extent.

One of their latest styles of ornamentation, as applied to panels in *jardinières* and vases, is the outline printing of human figures and scenes which are filled in by hand in colors, over the glaze. The effect is exceedingly rich and artistic, and by this process very creditable substitutes for the more expensive imported ceramic paintings are placed on the market at surprisingly low prices.

THE GREENWOOD POTTERY COMPANY

was incorporated in 1868, the present officers being Mr. James Tams, president, and Mr. James P. Stephens, secretary and treasurer. The business was established in 1861, under the style of Stephens, Tams, & Co. Mr. Tams came from Longton, Staffordshire, England, where, at an early age, he learned the pottery business in all of its branches. Until 1876 they made white granite or stone china ware, since which date they have been making a specialty of the manufacture of vitrified and translucent china for hotel, steamship, and railway uses. They are also producing at

the present time thin china table ware of a superior quality, with overglaze and underglaze decorations, for domestic purposes, porcelain hardware trimmings, and electrical, telegraph, and telephone insulating supplies. Some years ago they added an art department to their extensive establishment, and their productions, consisting of vases, plaques, and other ornamental designs, richly decorated in the Royal Worcester style, are characterized by elegance of form, of which, it is said, no duplicates are made. The best pieces possess an ivory finish and white enamel, raised gold, silver, and bronze effects. Their mazarine blue is particularly noteworthy, being exceedingly rich in tone and remarkably fine and even in texture, and has been favorably compared with the *Bleu de Roi* of European factories. Another style of decoration, which has been practised here to some extent, is *pâte-sur-pâte* or clay upon clay.

The plant of the company consists of seventeen large kilns, with an annual producing capacity of over half a million dollars. The experience of this company, in introducing their vitreous hotel china, reveals the extent of that deep-seated prejudice which existed in this country



98.—“IVORY” VASE,
ROYAL WORCESTER STYLE.
GREENWOOD POTTERY CO.

some years ago against everything made in America, but the superior merits of the ware were finally recognized, and it has now largely taken the place of imported china.

The mark used from 1865 to 1876 was the coat-of-arms of the State of New Jersey above the words "Ironstone China," and "G. P. Co." This was printed in black under the glaze. The first table porcelain made at this pottery was stamped "G. P. Co."

MR. THOMAS MADDOCK

first made plumbers' sanitary ware in 1870, and still continues to manufacture it extensively. At the American Institute Fair, held in New York in 1879, he exhibited an interesting large Grecian vase of stoneware, decorated on one side with a drawing of an ancient Egyptian potter at work. The names of half a dozen governors of as many States were written on the biscuit, who were present when the piece was being made.

THE DELAWARE POTTERY.

In 1880 one of Mr. Maddock's foremen went to the Enterprise Pottery and introduced these specialties there. Mr. Oliphant was then interested in the latter factory, but withdrew in 1884, and started the Delaware Pottery in partnership with three of his sons, in conjunction with Mr. Thomas Connelly, recently from the Belleek works, Ireland, and Mr. Charles Fay. Messrs. Oliphant & Co. manufacture plumbers' appliances and sanitary specialties, druggists' and jewellers' supplies. These wares have justly acquired a wide reputation for

excellence of quality, design, and decoration. Their Wedgwood ware mortars and pestles are characterized by extreme hardness of body and smoothness of finish.

About 1886 Mr. Connelly commenced experimenting in Belleek china. He succeeded in producing some exquisitely thin trial pieces of the finest grade, but the ware was never made in sufficient quantity to place upon the market. The few pieces which were produced, consisting of small ewers, cups, and saucers, were fired in the large kilns with the sanitary ware. This branch of the business was not developed beyond the experimental stage, although at the time of Mr. Connelly's death, in 1890, success was assured.

THE INTERNATIONAL POTTERY.

In 1878 Messrs. James Carr, of New York, and Edward Clarke, of England, commenced the manufacture of cream-colored and white granite wares, as the Lincoln Pottery Company, in the old Speeler works, one of the first potteries built in Trenton for the manufacture of Rockingham and yellow wares. Mr. Carr retired within a few months, and Mr. Clarke, with others, founded the International Pottery Co. In 1879 the business was purchased by the present proprietors, Mr. William Burgess, now United States Consul at Tunstall, England, in the pottery district, and Mr. John A. Campbell, who have retained the corporate title. Porcelain was made here, with varying success, for some years previous to 1888, when a new body, of exceptional standing qualities, was produced, and has been made to the present time. The

specialties of these works are toilet and dinner sets of artistic and novel shapes, in semi-porcelain body, in royal blue, still blue, and gray underglaze colors. Their flown blue services, produced within the past two years, are of exceptional merit and have been pronounced equal in all respects to the best of the kind produced in England. While no special effort has been made in the direction of decorative designs, many of their pieces are characterized

by elegance of form and a richness and depth of blue ground seldom surpassed in this country or abroad. Their royal blue "Wilton" dinner service is especially praiseworthy. The International Pottery Co. also produces



porcelain of a fine quality, white granite, and other grades of ware, with embossed gold, enamelled, and vellum-finished decorations. The mark used on certain patterns



100.—SEMI-PORCELAIN TABLE WARE. INTERNATIONAL POTTERY COMPANY.

of underglaze ware is the circular stamp enclosing the names of the members of the firm, which is impressed in the clay. This and their Rugby flint china mark, which is printed under the glaze in brown, are here given.

They are now stamping all of their porcelain goods in blue color :

Royal Blue

B—C

Porcelain.

The mark used on their ironstone china is the same which was formerly employed by Messrs. Carr & Clarke, and afterwards used in a modified form by Mr. Carr at his New York factory.

THE WILLETS MANUFACTURING CO.

Among the most extensive establishments in the Eastern States is that of the Willets Manufacturing Company of Trenton, N. J. The present proprietors, Messrs. Joseph, Daniel, and Edmund R. Willets, three brothers, succeeded to the business in 1879. The factory was erected in 1853 by William Young and Sons, who at first made Rockingham and common ware. At the Centennial Exhibition William Young's Sons made a display of crockery and porcelain hardware trimmings, at which time the plant included only four kilns. The business has since grown to such an extent, under the present management, that there are now thirteen large ware kilns besides those used for decorating. The products from these works include sanitary earthenware, plumbers' specialties, white and decorated pottery, opaque china, white granite, and art

porcelain. A specialty in dinner and toilet services is underglazed decoration on white bodies.

After the Ott & Brewer Company had perfected the body and glaze of their Belleek ware and got it well under way, William Bromley, Sr., went with the Willets Manufacturing Company and instructed them in the process.



101.—SHELL AND CUPID PITCHER—BELLEEK. WILLETS MANUFACTURING COMPANY.

The manufacture of white egg-shell ware, to which they are constantly adding new designs, is another specialty of these works, and the company is now competing successfully with the Dresden, Limoges, and other foreign factories in supplying white art porcelain to decorators. In

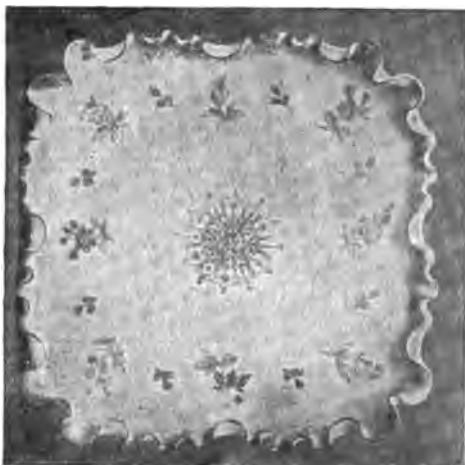
form their pieces are graceful and artistic, one of which is represented in Illustration 101. Some small picture frames, in Belleek body, decorated with delicately modelled flowers, are especially noteworthy.



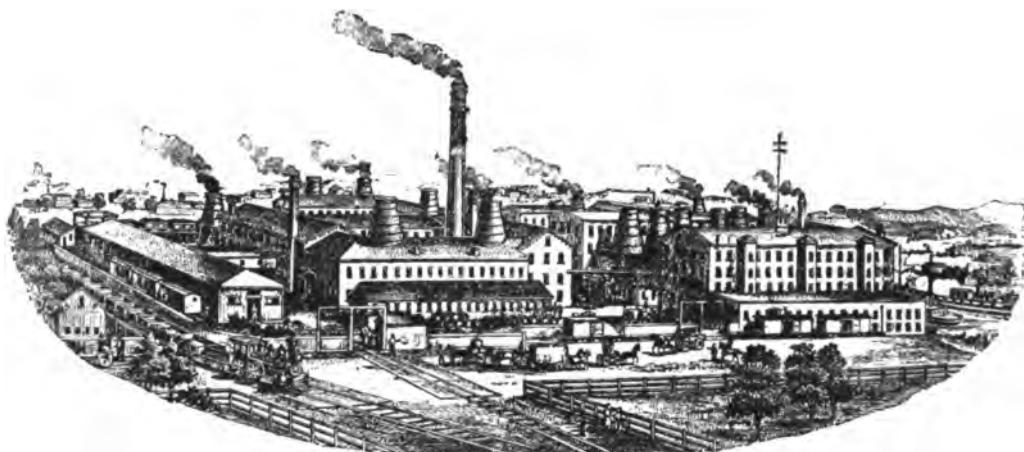
102.—LARGE VASE, CHRYSANTHEMUM DECORATION. WILLETS
MANUFACTURING COMPANY.

They also employ a number of competent artists to decorate their art goods, many of which are reproductions of the characteristic shell and coral forms of the Irish works. Illustration 102 represents a large Belleek vase

with open-work handles and chrysanthemum decoration in delicate tints on an ivory, gold-stippled ground.



103.—BELLEEK TRAY, DRESDEN DECORATION. WILLETS MFG. CO.



104.—WORKS OF THE WILLETS MANUFACTURING COMPANY, TRENTON, N. J.

THE CERAMIC ART COMPANY,
of which Mr. Jonathan Coxon, Sr., is president and Mr.
Walter S. Lenox secretary and treasurer, was established

in Trenton in 1889. The first named gentleman became superintendent at the Ott & Brewer Company's works after Bromley left, and the latter was formerly in charge of their decorating department. Here they learned the processes of manufacturing Belleek. They are rapidly making a name by their constantly increasing patterns, many of which are exquisitely conceived and show the touch of thorough artists. Their specialties are Belleek ware and "Indian china," many of their best pieces having been designed by Mr. William W. Gallimore. They have procured the best designers and painters that

can be found and employ both the overglaze and underglaze processes in decorating. Their egg-shell ware is also furnished in the white to decorators. Illustration 105 shows one of these undecorated pieces, a graceful lily-shaped cup and saucer. In addition to



105.—EGG-SHELL PORCELAIN—
THE "ENGAGEMENT" CUP AND SAUCER.
CERAMIC ART COMPANY.

vases and table pieces, they make many fancy patterns, such as thimbles, inkstands, parasol handles, menu slabs, and candelabra.

Among the most recent productions of the Ceramic Art Company are some beautiful pieces of carved ware, in Belleek body, which possess a high order of artistic

merit. The decoration is entirely in relief, and is executed by carving the designs in the clay before burning, the only tool used being an ordinary jack-knife. This work is done by Miss Kate B. Sears, a young lady artist employed by



106.—CARVED VASE. CERAMIC ART COMPANY.

the company. A spherical vase of this character, exhibited at the World's Columbian Exposition, is shown in Illustration 106. The interior is glazed, while the outside is porcelain bisque, entirely devoid of coloring in the decoration, which consists of elaborate designs of lilies and

child figures extending around a central zone. The soft, white surface of the ware is admirably suited to the subject selected for decorative treatment.

THE TRENTON CHINA COMPANY

was incorporated in 1859, "to manufacture and sell porcelain, china, chemicals, drugs, and other articles of which clay, sand, and other earthy substances form the basis or principal ingredients." Of late years a specialty of this company has been vitrified china, white and decorated, for table uses. These works were closed in 1891. After undergoing a very troublesome experience before perfecting the quality of their china,—which was at last accomplished under the management of Mr. Duggan,—the money and patience of its backers became exhausted, and the company went into the hands of a receiver.

OTHER TRENTON POTTERIES.

By an Act approved February 9, 1865, the Trenton Pottery Company was incorporated for the manufacture of earthenware and crockery of various descriptions, the incorporators being Appollinaire Husson, James Taylor, John F. Houdayer, and Edmund Husson.

The Empire Pottery of Messrs. Alpaugh & Magowan was established in 1863, and was formerly owned by Messrs. Coxon & Thompson. In 1883 the business passed into the hands of the present proprietors. They manufacture thin porcelain, dinner, tea, and toilet, and decorated wares, principally in white granite body. They make a specialty of sanitary and plumbers' earthenware.

The Mercer Pottery Company was organized in 1868, and at the present time Mr. James Moses is the sole proprietor. The products of this pottery consist of a fine line of semi-porcelain dinner and toilet ware, both white and decorated; also white granite wares of the same kind. This firm was the first to produce what is now known as semi-porcelain earthenware in this country. Mr. Moses, we think, is fairly entitled to that credit. He has made a great success of it, and represents one of the leading firms in the United States to-day.

The New Jersey Pottery Company was organized in 1869, the incorporators being Elias Cook, John Woolverton, Caleb S. Green, Barker Gummere, and Nathaniel E. Britton.

The Fell & Thropp Company, known as the Trenton Pottery, was the old Taylor & Speeler pottery. It is now owned by Samuel E. Thropp and J. Hart Brewer. They manufacture a full line of white granite and C. C. wares. This pottery is the oldest white granite pottery in Trenton.

Messrs. Dale & Davis built the Prospect Hill Pottery in 1880, the latter having formerly been manager for Mr. John Moses at the Glasgow Pottery. They produce a large line of decorated semi-porcelain and white granite dinner and toilet wares.

The Crescent Pottery Company, composed of W. S. Hancock and Chas. H. Cook, was established in 1881. They manufacture sanitary earthenware and a full line of C. C. wares. At the present time they are one of the leading firms of Trenton.

The Crown Porcelain Works of Messrs. Barlow and Marsh were started in 1890. They produce a fine line of decorated *faience* specialties. Mr. Marsh was formerly connected with Messrs. Robertson & Company of England, and is a practical potter and an artist of no mean ability.

The Trenton Terra-Cotta Company, of which Mr. Joseph McPherson is president, and Mr. O. O. Bowman is treasurer, manufacture an extensive line of fire-brick, vitrified salt-glazed sewer pipe, terra-cotta chimney tops and flues, and garden vases. The latter are particularly elaborate and deservedly popular.

The American China Company of Trenton produced to a limited extent stone china decorated by the chromolithographic process, which has been employed in Europe for perhaps forty years. This process consists in the application of vitrifiable decalcomanie designs to the surface of the ware, either under or over the glaze, usually the latter. On a plate in my possession, made by the above-named company, is a central design of a crab, with marginal fronds of sea-weed in colors,—green, brown, black, and red. The effect is that of the ordinary decalcomanie transfer work, but, having been fired, the designs are permanently affixed, as in the other overglaze decorations. This process has been carried to great perfection, especially by the Doulton factory of Lambeth, England, and by some of the French potters, intricate and artistic designs being produced in delicate coloring which resemble fine hand-painted work, but the transfer printing can be distinguished by the dots and lines of the engraving, which can be readily detected on close inspection.

At the Arsenal Pottery of the Mayer Pottery Manufacturing Company, of which Mr. Joseph S. Mayer is president, decorated porcelain, underglazed and majolica wares are made. This is, probably, at the present time, the only concern in the United States which manufactures the so-called majolica ware. Their exhibit at the Chicago Fair included some finely modelled Toby pitchers or jugs, which are excellent imitations in form and color of the old English design so familiar to collectors.

The Union Pottery Company, which was closed in 1889, made for the political campaign of the previous year a quantity of six-inch tiles, dinner plates, etc., decorated with printed portraits of the Presidential candidates. This company was incorporated in 1869, the incorporators being Baltes Pickel, William White, Henry Smith, Joshua Jones, and Elias Cook.

The American Art China Works were established December 1, 1891, in what was formerly known as the Washington Pottery, by Messrs. Rittenhouse, Evans, & Co. The ware made here is distinctively an American production, and is placed upon the market as American china. The body is thin, translucent, and strong, and resembles the Belleek ware made at other Trenton factories. The shapes are new, and the decorations artistic. The proprietors of these works are actuated by the laudable determination to demonstrate to the American public that it is possible to produce home goods fully equal in every respect to any that can be made abroad. White china, in all the shapes produced at these works, is sold for decorating.

In the latter part of 1892, Messrs. W. T. Morris and F. R. Willmore commenced the erection of a pottery in Trenton for the manufacture of art wares. The former was at one time connected with the Belleek works, Ireland, and the Royal Worcester Porcelain works, England, and recently with the Ott & Brewer Pottery of Trenton. Mr. Willmore was also for many years employed as decorator at the two last-named establishments. Their new works, which they have named the Columbian Art Pottery, were finished in the early part of 1893. Thin Belleek china and ivory ware, of a fine quality, are made here in original forms and decorations, and include articles of utility and ornamental pieces, such as candle-sticks, umbrella holders, *jardinières*, tea-pots, and specialties.

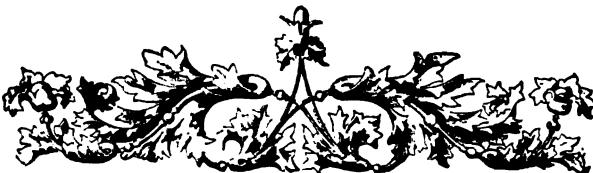
In addition to the Trenton establishments already mentioned are the East Trenton Pottery Co., which, during the Presidential campaign of 1888, produced plates with engraved portraits of the candidates ; the Anchor Pottery ; Enterprise Pottery Co. ; Egyptian Pottery Co. ; Equitable Pottery Co. ; Warren Kimble ; Imperial Porcelain Works of F. A. Duggan ; C. W. Donaghue, potters' supplies ; and a number of decorating establishments—Pope & Lee, Jesse Dean Decorating Co., W. C. Hendrickson, Tatler Decorating Co., and Poole & Stockton.

Other parties have also been engaged in the pottery industry since 1860 with varying success, some twenty establishments having discontinued business, with an aggregate loss of two million dollars.

Recently the Trenton Potteries Company has been incorporated, to acquire and continue the business here-

tofore conducted by the Empire, Enterprise, Delaware, Equitable, and Crescent potteries, with a capital stock of \$3,000,000. Sanitary plumbing, toilet, and table wares will continue to be the staple productions.

The constant changes which are taking place in the pottery business in Trenton, through the closing of factories and the establishment of new ones every year, render it impossible to present a complete history of the industry to date, for even as these lines are being written word comes to us that new enterprises are being started; and the wonderfully rapid advances in the art furnish evidence that no chronicler can keep pace with the progress of the American potter.





CHAPTER XII.

POTTERIES ESTABLISHED BETWEEN 1859 AND 1876.

A POTTERY was erected in Peoria, Ill., by Messrs. Fenton and Clark in 1859, who came from Bennington, Vt. They commenced the manufacture of white granite and cream-colored wares, but the venture did not prove a financial success and the factory was only operated about three years. Afterwards the works were continued by other parties, who made Rockingham and stoneware. We have seen some brown pottery tobacco jars which were made during this period, marked ^{PEORIA}
_{ILLINOIS}, of good form and excellent glaze.

In 1873 the Peoria Pottery Co. was organized and continued the manufacture of stoneware until 1889, when they took up the white-ware line and still continue to produce white granite, cream-colored, and decorated wares. At the Chicago Exhibition this company displayed some fine tinted table services in pale green, salmon, and other delicate colors.

THE NEW ENGLAND POTTERY CO.

Mr. L. W. Clark, son of Mr. Decius W. Clark, who was at one time superintendent of the United States Pottery,

Bennington, Vt., accompanied his father to Peoria, Ill., in 1859, and remained with the new firm of Fenton and Clark at that place for about two years, when he left to enter the army. In 1875 he went to Boston, and, in partnership with Mr. Thomas Gray, assumed control of the New England Pottery. This establishment was founded in 1854 by Mr. Frederick Meagher, who made Rockingham and yellow ware. It was afterward taken by Mr. William H. Homer, from whom the plant was purchased by the present proprietors, who now produce the usual lines of useful services in cream-colored and white granite ware. For the past five years they have been making a decorated product in colored bodies, to which they have given the name "Rieti" ware. This is a semi-porcelain, finished and decorated chiefly after the Doulton, Adderley, and Worcester methods. They also make porcelain of an admirable quality, and their goods are characterized by an artistic style of decoration and excellence of glaze, their mazarine blue and "old ivory" finish being especially praiseworthy. The decorating branches are under the direct supervision of Mr. J. W. Phillips, who originates and engraves many of the best designs used in their printing processes. Mr. Thomas H. Cope-land designs and models most of their pieces which, from the line of trade they seek, are chiefly utilitarian rather than ornamental, but they possess a grace of outline and delicacy of coloring which render them objects of great beauty. The chocolate jugs, *jardinières*, and cuspids of these works compare very favorably with the imported wares, after which they are to some extent patterned. Of

the few purely decorative forms which they have attempted, a semi-porcelain vase, twenty inches in height, made in 1889, is particularly meritorious. This is artistically painted in natural colors on raised paste, the top and base

being in solid dead gold. Mr. Bands, of the Royal Worcester works, England, was the artist (Ill. 108).

A two - handled cracker jar, made at this factory, is worthy of illustration. The body ground is polished ivory. The ornamentation consists of corn-flower grouping in embossed gold, with ferns and foliage in natural tints, outlined with



107.—TWO-HANDED CRACKER JAR.
NEW ENGLAND POTTERY CO.

gold. The fluted neck and base are tinted in robin's-egg blue with fleur-de-lis pendants, in relief gold. The form of the vessel is graceful and the handles are a convenient adjunct to the usually awkward form of cracker or rose jar (Ill. 107).

Mr. Clark's previous career as a potter will be found in connection with the history of other establishments, with which he was, at various times, associated. Porous cups for electrical purposes and other specialties in earthenware are also made here.

Among the most recent productions of the New England Pottery, of an ornamental character, are a *jardinière* and a chocolate jug, which deserve special description. The former is made of stone porcelain body and finished with bronze leaf scrolls on a white ground with buff shadings. The base is in clouded bronze and Roman gold. The form of the piece is graceful and the waving outlines of the upper edge produce an exceedingly ornate effect (Ill. 109).

The chocolate jug is also of stone porcelain. This is covered from shoulder to foot with a fine mazarine blue glaze, on which is laid a 'cameo' decoration in raised white enamel. The subject of the decorative design, which is artistically conceived and admirably executed, is an "Interview between Bird and Bug" on a hawthorn bush. The shoulder of the piece is white, finished in relief gold filigree work, with small sectional panels of maroon, bearing raised gold rosettes. The borders and handle are finished in Roman gold. The contrast of the white design and



108.—SEMI-PORCELAIN VASE.
NEW ENGLAND POTTERY COMPANY, 1889.

the rich gold ornamentation against the deep-blue ground is particularly effective (Ill. 110.)



109.—JARDINIÈRE. NEW ENGLAND POTTERY CO.

POTTERY AT BATH, S. C.

In the spring of 1862, Col. Thomas J. Davies, a cotton planter in Edgefield Co. (now Aiken Co.), South Carolina, was induced by Anson Peeler, formerly of Bennington, Vt., who had been a resident of the former State for some six years, to embark in the manufacture of fire-brick near Bath, on the South Carolina Railroad. Mr.

Peeler was a carpenter by trade and a skilled mechanic, and was placed in charge of the entire business. The necessary capital and the slaves for performing the labor were furnished by Col. Davies. Soon after the establish-



110.—CHOCOLATE JUG. NEW ENGLAND POTTERY COMPANY.

ment of these works large quantities of bricks were produced equal in quality to any that had previously been imported, which were marked "Bath, S. C., Fire-Bricks." The great furnaces for casting ordnance, and the powder mills of the South, procured their fire-bricks from these

works. From a small beginning an extensive business was soon established, and crucibles and tiles for gas works were also made extensively. In 1863 a great demand sprang up for earthen jars, pitchers, cups and saucers, and the fire-brick works were partially transformed into a manufactory of such wares, which were produced in large quantities by negro men and boys, who employed the old-fashioned "kick-wheel" in their manufacture. The Confederate hospitals were supplied with thousands of these articles of rude and primitive shape, the body being composed of three fourths to five sixths of kaolin and alluvium earth from the swamp lands of the Savannah River, about six miles distant. This composition made a tough body which partially vitrified in burning. With sand and ashes mixed thoroughly as a glaze, excellent results were obtained. The ware was black or brown, clumsy, and entirely devoid of ornamentation, but strong and admirably adapted to the purposes demanded by the exigencies of the time. In 1864 the products of the works were insufficient for supplying the demand, although the large horizontal kilns were devoted entirely to the burning of these wares. At the termination of the war, in 1865, operations at this pottery were suspended, and the enterprise passed into history.

Col. Davies was born in Georgia, and is a Southern gentleman of the old school. He was graduated from Princeton College, New Jersey, and has been a resident of South Carolina for fifty years. Since his retirement from the pottery business he has been engaged in the mining of china clays.

So far as can be ascertained, there was but one other pottery in the South during the Civil War,—that of the Stevens brothers, near Milledgeville, Georgia, where crude earthenware was made. These works have been extended, and are at present producing fire-bricks and tiles.

THE PHILADELPHIA CITY POTTERY.

These works were established by Messrs. J. E. Jeffords & Co., in 1868, as the Port Richmond Pottery Co.



III.—DECORATED COFFEE-POT, DARK-BLUE GROUND. J. E. JEFFORDS & Co.

The pottery now includes two distinct factories, one of which turns out a high grade of Rockingham, yellow, and white-lined blue ware, mostly for culinary purposes, while the adjoining works produce an excellent variety of white and decorated pottery for table and toilet uses. In Rock-

ingham, some of the old English designs are reproduced, such as the "Toby" ale-jug and the cow creamer. The decorated white ware, such as tea-pots and gypsy kettles, ornamented with floral designs in gold and colors, on dark-red, blue, brown, and cream-colored grounds, possess considerable merit. A few years ago a more elaborate style of ornamentation was attempted in the painting of bird and floral subjects above the glaze (see Ill. 111), but this was soon discontinued as being too costly for the general market. Printing from copper plates is extensively practised here at the present time, and com-



petent artists are employed in the decorative departments. Mr. Jeffords came from the New York City Pottery of Messrs. Morrison & Carr, where he learned the various branches of the business. He has fully equipped his factories with the most approved modern appliances, and employs about one hundred and eighty hands.

Among other specialties extensively produced here are decorated *jardinières* and stoneware bottles for liquor baskets, which are sold largely for yachting and excursion purposes.

The only mark which has ever been used at this establishment is a diamond bearing the date of the establishment of the present firm, 1868.

THE UNION PORCELAIN WORKS.

Messrs. Thomas C. Smith and C. H. L. Smith are the proprietors of these works, which are situated at

Greenpoint, Long Island. They manufacture a true hard porcelain in table services, decorative pieces, electrical insulators, and hardware trimmings. The senior member of the firm, who is an American, was formerly an architect by profession, but owing to a peculiar combination of circumstances was forced to purchase these works about the time of the breaking out of the Civil War, without intending to engage in the business himself. During an absence abroad shortly afterwards, however, he conceived the idea of embarking in the porcelain business, and on his return he set to work to utilize the knowledge which he had acquired among the large factories of Europe and at once commenced his experiments. The composition which had been used by the German potters from whom he bought the works was the English bone body, which was abandoned by Mr. Smith in 1864, when he introduced the hard kaolinic body, which has since been made exclusively to the present time. An example of translucent bone porcelain, made in the latter year, is a beer mug with embossed figures of Bacchus, surrounded by vine-leaves, shown in Illustration 112. The earlier experiments made by Mr. Smith were attended with only partial success, but in 1865 he perfected a plain white ware for



112.—BONE-CHINA MUG,
RAISED DECORATIONS. UNION
PORCELAIN WORKS, 1864.

the market, and a year afterward he commenced to decorate his goods. But here he was met with the difficulty of finding underglaze colors which would stand the intense heat of the sharp fire necessary to vitrify the ware. So far as we have any knowledge, Mr. Smith was the first potter in America to apply the underglaze method of decoration to hard porcelain, for it has already been seen that Messrs. Tucker & Hemphill, in Philadelphia, used only overglaze colors from 1825 to 1838, during the existence of their porcelain factory. The Greenpoint works, however, have of late years used the overglaze method also, in order to obtain a greater variety of coloring in the production of decorative art pieces.

The late Karl Müller, a talented German sculptor and artist, who was educated in Paris, was employed for several years at the Greenpoint works as chief designer and modeller. Just previous to the Centennial Exhibition, Mr. Müller designed a number of vases and other pieces which exhibit a marked originality in conception and a high degree of excellence in execution. Of these we may mention the Century vase, in which appears a relief portrait of Washington against a mat blue ground, panels around the base representing, in white relief, an Indian, the Tea Scene in Boston Harbor, a Revolutionary Soldier, and other historical subjects. The handles of the vase represent the head of the American bison. A second vase is designed to illustrate Longfellow's poem, "Kéramos," with raised designs commemorating the history of the ceramic art from the most remote ages. Two busts in a buff body represent Edwin Forrest as *William*

Tell (Ill. 116), and Charlotte Cushman as *Mcg Merrilies*, modelled by Mr. Müller from photographs. A series of statuettes, pitchers, and busts of prominent Americans, in porcelain biscuit, reveal the highest art of the sculptor. A Poet's pitcher, in biscuit, designed by Mr. Müller, is among the most highly artistic works produced at this factory. It is of graceful form, embellished with relief portraits of prominent poets of ancient and modern times. The "Liberty cup" is beautifully modelled, with embossed figures of Mercury and Justice, surrounded by the corn plant of the North and the tobacco plant of the South, with handle representing the Goddess of Liberty standing on an eagle with outspread wings. It is finished in mat gold traced with color (Ill. 113).



113.—THE LIBERTY CUP, MODELLED BY MÜLLER. UNION PORCELAIN WORKS.

Among the artists engaged in decorating the Green-point porcelain, Mr. J. M. Falconer of Brooklyn has been one of the most prominent. Some of his paintings on plates and plaques exhibit a high degree of artistic merit, as in some views of Centennial buildings, and a number of ideal designs, in which the coloring is chaste and the execution admirable.

The manufacture of hard porcelain tiles has become an important branch of the business of this factory. These tiles are made both thick and thin, in underglaze decoration, and are claimed to be the only tiles made in this country which will endure the heat of a hearth fire.



114.—GREENPOINT PORCELAIN VASE, IN EMBOSSED GOLD AND JEWEL WORK.
GROTESQUE LIZARDS IN MAT GOLD.

They are decorated with figures of griffins and other fancy designs. The overglaze method has also been applied to tiles for mantel facings and wainscoting, and on the walls of the private office of the establishment may be seen a

series of large tile panels embellished with paintings representing the ancient ceramic processes of Egypt, as depicted on the pyramids.

In table services the most noteworthy are those decorated in overglaze colors and white enamelled designs. A handsome dinner set in underglaze blue outlined with gold, is one of the latest achievements of this factory.



115.—TÊTE-À-TÊTE SET. UNION PORCELAIN WORKS.

The composition of the paste varies according to the purpose for which it is to be used. For the manufacture of hardware trimmings, which form an important part of the products of these works, a larger proportion of kaolin is introduced.

The porcelain made here is composed in body of kaolin, quartz, and feldspar. It is fired in biscuit at a low temperature, in the second story of the porcelain kiln, using for its baking the surplus heat passing away after having done its greater work in the first story or glost kiln where the glazing is done. At this first burning the ware



116.—BUST OF EDWIN FORREST AS WILLIAM TELL.
UNION PORCELAIN WORKS.

receives only sufficient fire to make it properly fasten together in form. It is quite fragile, easily broken with the fingers, and porous, not having yet had sufficient heat to commence vitrification. In this condition it is what is

termed porcelain biscuit, and is ready for the glaze-tub. The glaze of porcelain is composed of the same materials as the body, and so compounded that those elements which are soonest fluxed by the influence of the heat are in greater proportion than they are contained in the body. The porous, low-fired biscuit is dipped into a liquid puddle of glaze. Upon being withdrawn its porosity quickly absorbs the excess of water, leaving a dry coating of the glaze compound, which has held the water in suspension, upon the surface of the piece. This piece of porous biscuit covered with glaze is now cleaned of glaze upon its foot, or that part upon which it rests, to prevent its sticking or burning fast to the clay sagger or firing case; otherwise the glaze on the bearing parts would, at the time of flowing, form a cement, fastening the piece and the sagger together. The pieces are placed separately in the saggers. The heat in firing hard porcelain is carried to such a high degree that the ware touches the point of pliability, almost the melting-point. At this great heat the body is vitrified; at the same time the glaze, from its slightly softer composition, is melted into the body of the ware, producing a hard, vitreous, and homogeneous material properly known as true, hard porcelain. This is the process used at Sèvres, Meissen, Berlin, and elsewhere.

THE MOORHEAD CLAY WORKS.

These works were established at Spring Mills, Montgomery Co., Pa., in 1866, by Messrs A. S. Moorhead and Wm. L. Wilson, and three years later were entirely

destroyed by fire. New works were at once built on the same site, of much greater capacity. The products of these works are terra-cotta sewer pipes, ornamental chimney tops, drain tile, pipe flues, fire-brick and tiles, garden edging and border tile, flower-pots, terra-cotta window boxes, hanging vases, *jardinières*, garden vases, pedestals and statuary, rustic ornaments, fountains, aquarium ornaments, and terra-cotta shapes for decorators.

THE CHELSEA KERAMIC ART WORKS.

Mr. Alexander William Robertson started a small pottery in Chelsea, Mass., in the year 1866, for the manufacture of brown ware such as was made in Great Britain, and of lava ware similar to that of Germany. Two years afterwards Mr. Hugh Cornwall Robertson, a younger brother, who had served an apprenticeship at the Jersey City Pottery in 1860, was admitted to partnership in the business, the firm name becoming A. W. & H. C. Robertson, when the production of brown ware was discontinued and the manufacture of plain and fancy flower-pots was substituted. In the following year porous cones or filters were made for chemical purposes. In 1872 James Robertson, a practical potter of wide and varied experience in Scotland, England, New Jersey, and New York, and recently from the East Boston pottery, joined his sons, the firm style being changed to James Robertson & Sons, when work of a more pretentious character was undertaken. A red bisque ware, in imitation of the antique Grecian terra-cottas and Pompeian bronzes was first pro-

duced in 1875. The factory adopted the name of the Chelsea Keramic Art Works. The red ware was characterized by a remarkably fine texture and smooth finish, the clay being peculiarly adapted to the faithful reproduction of the graceful classic forms, the fine polished grain offering an excellent surface for the most minute carving, showing the engraved lines as perfectly as on wood. Some of the vases were decorated with red figures on a black ground, in the ancient Greek style, modelled after pieces in the Englefield collection. Of these the amphora, lecythus, *cænophœ*, *stamnos*, and krater were favorite forms. The ornamentation of this class of ware is the natural red clay, the black having been worked on with the brush around the designs. The process of polishing the surface completed the resemblance to the antique. One of the finest of these reproductions is a large vase, thirteen and a half inches high, in the Boston Museum of Fine Arts. It is the early work of Mr. John G. Low of Chelsea (Ill. 117).

On thirteen vases of fine red body, Mr. Franz Xavier Dengler, the talented young sculptor, who afterwards died at the age of twenty-five, modelled from life, in high relief,



117.—GREEK REPRODUCTION, CHELSEA
KERAMIC ART WORKS. BOSTON
MUSEUM OF FINE ARTS.

choosing child and bird forms. One of these, in the Boston Museum of Fine Arts, is shown in Illustration 119. It is a vase fifteen inches in height, of compact, red clay. The firm also received the benefit of advice from a number of capable artists, including John G. Low, G. W. Fenety, and others. For lack of public support, however, this branch of the art was soon abandoned. The next venture was the Chelsea *faience*, introduced in 1877, which



118.—CHELSEA FAIENCE. BARBER COLLECTION.

is characterized by a beautiful soft glaze. This ware soon attracted the attention of connoisseurs, and carried the firm to the front rank of American potters. The decoration consists of floral designs, either made separately by hand and sprigged on, or carved in relief from clay laid directly on the surface while moist.

A number of plaques about ten inches in diameter were modelled by Mr. H. C. Robertson, either engraved or carved in high relief, some of the latter being modelled

after Doré's illustrations of La Fontaine's *Fables*, such as "The Wolf Turned Shepherd," etc. They were made of a stone body, and generally covered with a quiet blue or gray glaze.

Some novel effects were produced by *hammerring* the exterior of vases before burning, and afterward carving sprays of flowers in relief and applying them to the indented surface. The modelling was executed by Miss Josephine Day, a sister-in-law and pupil of Mr. H. C. Robertson, and by Mr. Robertson himself. Being done by hand, from original designs, no duplicates were produced. On some of the hammered pieces, the designs were cut into the surface and filled in with white clay, forming a mosaic, the bases of the vessels being colored buff, which formed a pleasing contrast beneath a semi-transparent glaze. About the same time a variety of *faience*, known as the Bourg-la-Reine of Chelsea, was produced by the process of paint-



119.—A "DENGLER" VASE, RED WARE,
MODELLED DESIGNS. BOSTON MUSEUM
OF FINE ARTS.

ing on the surface of the vessel with colored clays and covering with a transparent glaze, on the principle of the Limoges *faience*.

Mr. James Robertson died in 1880, after a long and useful life, at the ripe age of seventy years. The firm continued under the same name, and in 1884 A. W. Robertson retired from the business. In that year the remaining partner, Mr. Hugh C. Robertson, commenced



120.—INLAID, HAMMERED, AND EMBOSSED POTTERY.
CHELSEA KERAMIC ART WORKS.

to make a stoneware somewhat resembling parian in appearance, possessing a hard, vitrified body, which he worked into a variety of artistic forms.

From this time Mr. Robertson directed his efforts toward solving the secret of the famous Chinese *Sang de bœuf*, and after four years of sacrifice and patient investigation his labors were in a measure successful. He believes he has discovered the exact treatment necessary to produce the true ox-blood red, which with the Chinese

was the result of accident rather than an established art. The body is the true stone, perfectly waterproof, and capable of resisting as high a degree of heat as any ware. The forms of the vases are simple, with curving outlines, and entirely devoid of ornamentation which would tend to impair the beauty of color, which is that of fresh arterial blood, possessing a golden lustre, which in the light glistens with all the varying hues of a sunset sky. In experimenting to obtain the blood-red of the *Sang de bœuf*, varieties were produced of a deep sea-green, "peach-blow," apple-green, mustard-yellow, greenish blue, maroon, and rich purple, the glaze being hard, brilliant, and deep. Examples of this ware now grace the cabinets of a number of collectors in the United States, of which Mrs. F. S. Thomas, of New York, purchased four of the finest. Only three hundred pieces of the *Sang de Chelsea* were made, but the demand for works of this character being limited, some of the finest examples still rest on the dusty shelves in the Chelsea workshop.



121.—CRACKLE VASE. BOSTON MUSEUM
OF FINE ARTS.

Imitations of the Japanese crackle ware were also produced, and a specimen of this class, in the Boston Museum of Fine Arts, which is of a gray color, with blue underglaze decoration, compares very favorably with Oriental



122.—PLAQUE REPRESENTING “SPRING,” DESIGNED BY H. C. ROBERTSON, 1879.

examples. This was executed by Mr. Hugh C. Robertson (Illustration 121).

In the collection of Dr. Marcus Benjamin of New York City is a pilgrim vase decorated after a drawing by Mr. James E. Kelly of New York, which originally ap-

peared in the old *Scribner's Monthly Magazine* of May, 1878, the subject being the old-time post boy, mounted on a horse and heralding his approach to the village by blowing his trumpet, which afterwards developed into Kelly's statuette of Sheridan (see *Cyclopedia of American Biography*,—Sheridan). The figures were modelled by Mr. Hugh C. Robertson in low relief, to which an effective glaze adds depth and distance. They were worked in white clay and laid on the yellow body of the vase and then covered with a single glaze, producing the effect of a grayish-blue design against a yellowish-olive or mouse-colored ground. Only five or six copies were produced.

After more than twenty years of devotion to his art, Mr. Robertson was compelled to close his factory in 1888 for lack of means to carry his work further. A company, however, was incorporated on July 17, 1891, under the title "Chelsea Pottery, U. S.," of which Mr. Hugh C. Robertson was appointed manager. Here, with increased facilities at his command, Mr. Robertson will devote himself to the further development of American ceramic art.

POTTERY AT PHÆNIXVILLE, PA.

The Phœnixville Pottery, Kaolin, and Fire-brick Company was organized in 1867, and a few years later was succeeded by Messrs Schreiber & Co., who made yellow and Rockingham ware, and terra-cotta ornaments and wall-pieces. Heads of hounds and stags in several sizes, and large boar's heads, were made extensively here, and twenty years ago were in demand for decorating the in-

terior of public-houses. Some of these may still be seen in country taverns. These were considered works of considerable artistic merit when first produced. The antlers and horns of stags and antelopes were made separately and afterwards inserted. Messrs. Beerbower & Griffen took the pottery in 1877 and commenced the manufacture of white granite ware. In 1879 the firm name was changed to Griffen, Smith, & Hill, and in the following year

the manufacture of "Etruscan" majolica was added. Through their majolica ware the firm became widely known. The modelling of some of the pieces, such as *comptoirées* with supports composed of three intertwined dolphins, boudoir flower-shells or jewel cups, and



123.—TERRA-COTTA BOAR'S HEAD. PHœNIXVILLE POTTERY. BARBER COLLECTION, PENNSYLVANIA MUSEUM.

other fancy shapes, was refined and artistic, the designer being an English artist of the name of Bourne. Some of these designs bear a striking resemblance to the Irish Belleek ware, not only in conception but in the extreme thinness of the body and the tinted nacreous glazes which cover them. Coral, sea-weed (*Fucus*), and marine shells were closely imitated and their commercial majolica for table purposes was largely made in leaf forms from moulds taken from the natural objects. The impressed mark

used on this ware was a monogram composed of the initials of the firm (G. S. H.), sometimes surrounded by a circular band containing the words "Etruscan Majolica." These marks continued to be used after the retirement of Mr. Hill, when the style became Griffen, Smith, & Co. From 1880 to 1890 the factory produced a good grade of white and decorated ware, mostly in table services and toilet sets. In 1890 a large portion of the works was destroyed by fire and the manufacture of majolica was dis-



124.—MAJOLICA. PHOENIXVILLE POTTERY.

continued. Mr. Smith withdrew from the firm in 1889 and erected levigating mills at Toughkenamon, Pa., near which place are large beds of kaolin. The firm style was then changed to Griffen, Love, & Co.

As early as 1882 experiments were commenced in the manufacture of hard porcelain, and a series of sample pieces were made for the New Orleans Exhibition. The quality and designs of these trial pieces were creditable, and the experiment proved that this factory was capable

of producing true porcelain of a high order. One of the New Orleans pieces, a pitcher of thin semi-transparent body, was also made of white earthenware, glazed and gilded, the latter of which is reproduced in Ill. 125. It is in the shape of a canteen, the mouth representing the head of a Continental soldier.



125.—WHITE-WARE PITCHER.
PHOENIXVILLE, PA.

The raised designs are flesh-colored, on a solid gold ground. The three-cornered hat is black. Mr. Scott Callowhill, an English artist, was employed for a while in modelling and painting, but left to accept a position with the Providential Tile Works of Trenton.

At the beginning of the year 1891 a change was made in the proprietorship, and a new company incorporated, under the title of the Griffen China Company, for manufacturing fine translucent French china in plain white table services.

In 1892 these works were permanently closed.

THE HAMPSHIRE POTTERY.

Some original work of a high character is now being done at the Hampshire Pottery of Messrs. J. S. Taft & Co., Keene, N. H. This pottery was started in 1871 for the manufacture of red ware, and afterwards stoneware. At a later date majolica was made quite extensively.

Recently the firm has been paying particular attention to art specialties, in new and graceful shapes and novel decorations, such as fancy baskets, jugs, cracker jars, and cupidors, comb and brush trays, bon-bon boxes, rose bowls, tea sets, and umbrella stands. The ware is a white, opaque body, covered with a variety of effective glazes. I have seen at Niagara and other summer resorts pieces of Keene pottery with local views printed upon the surface for sale to tourists as souvenirs.

One of the best designs produced by these works is the "Witch Jug," of a graceful form and ivory tint. On one side is painted, in appropriate colors, a witch, with broom in hand, in pursuit of bats, against a ground of clouds. On the opposite side are three witch pins in black, and the lettering "Salem, 1692," in gold. The handle, foot, and border of lip are gilded. This souvenir jug was made especially for Mr. Daniel Low, silversmith, of Salem, Mass., to commemorate the witchcraft delusion which obtained in that place two hundred years ago, the sale being entirely controlled by him.

About forty hands are employed at the Hampshire Pottery, nearly half the number being engaged in decorating.



126.—THE WITCH JUG. HAMPSHIRE
POTTERY. J. S. TAFT & CO.,
KEENE, N. H.

TERRA-COTTA WORKS, PHILADELPHIA.

Messrs. Galloway & Graff displayed at the Centennial terra-cotta statuary, tazzas, and vases in Greek shapes for decorators, pedestals, fountains, flower-pots, and garden edging.

Messrs. Harvey, Moland, & Co., successors to Wm. K. Black, are large producers of garden vases, statuary, sewer pipe, and drain tile.





CHAPTER XIII.

CINCINNATI.

AMONG the first potteries of Cincinnati was one which was in operation for some time previous to the middle of the present century, owned by a family of the name of Kendall, father and sons, who were remarkable for their great stature, being over six feet in height. This pottery is said to have been the first in that city to produce a fine grade of stoneware, yellow, and Rockingham. About the year 1850 the Kendalls gave up business and went farther west.

William Bromley, originally from Stoke-upon-Trent, England, went to Cincinnati about 1842 and successfully operated a pottery there for several years. At one time the ware in one of his kilns met with a singular mishap in the process of firing, which caused it to assume such a novel appearance that it was sold at very high prices. There was considerable demand for more of the same character, which of course could not be furnished, because Mr. Bromley did not know how the freak occurred, and his excuse to those who desired it was that he could not supply it *because it was too costly to make.* He died about twenty years ago.

George Scott, of Staffordshire, England, came to this country about 1846, and shortly after settled in Cincinnati, where for some time he sold goods for William Bromley. It is said that, after saving some money, he imported a thousand dollars' worth of queensware from England, which he disposed of advantageously and with the proceeds purchased an old tavern on Front Street, and changed it into a pottery. With the able assistance of his wife, who was as capable a potter as he, a business was established which soon yielded him a competency, and after his death some years ago the firm's name was changed to George Scott's Sons, under which style the business is now carried on. This consists of the manufacture of a high grade of white granite, cream-colored, decorated, and printed table and toilet wares.

The Hamilton Road Pottery was founded by Messrs. M. and N. Tempest, and in 1865 was purchased by Mr. Frederick Dallas, who continued the business until his death a few years ago. Here were made stone china and the commoner wares. Some of the earliest experiments of the ladies of Cincinnati were conducted at these works, as we shall see hereafter, which marked the first step in the development of the industry in that city.

Messrs. Tempest, Brockmann, & Co. commenced the manufacture of common ware in Cincinnati in 1862, and five years later first produced white ware. In 1881 a stock company was organized, under the title of The Tempest, Brockmann, & Sampson Pottery Co., and so continued until 1887, when Mr. C. E. Brockmann, the only surviving member of the original firm, bought the

entire business, and has since conducted it under the name of The Brockmann Pottery Co. The works cover an acre of ground, and are about to be further enlarged. The products of this factory embrace cream-colored, white granite, and decorated wares.

WOMAN'S WORK IN CINCINNATI.

The decorative pottery movement which has made Cincinnati celebrated as a ceramic art centre may be said to have had its inception in 1875, when Mr. Benn Pitman, of the Cincinnati School of Design, procured from the east some overglaze colors and invited a few of the ladies of that city, who were interested in the subject, to meet at his offices in the Carlisle Building to talk over the matter of forming a class to receive instructions in china painting. It was in these rooms that the first experiments in porcelain decoration were made, under the direction of a young German lady, Miss Eggers, who had previously acquired some knowledge of the art at Dresden. Following closely on these somewhat imperfectly successful efforts came a "Centennial Tea Party," held by the "Women's Centennial Executive Committee, of Cincinnati," for the benefit of the Mount Vernon fund. The pieces of china, which had been painted by the ladies especially for this occasion, were placed on exhibition and afterwards sold by auction. Good prices were realized, the highest being twenty-five dollars for a cup and saucer. This event marked the first step in the progress of the ceramic art in Cincinnati. In the same year, Miss M.

Louise McLaughlin painted some white porcelain plates in blue underglaze designs, which were sent to Messrs. Thomas C. Smith & Son, proprietors of the Union Porcelain works at Greenpoint, Long Island, by whom they were fired, and one of these first attempts is preserved in the Cincinnati Museum of Art.

During the Centennial Exposition, in the following year, Miss McLaughlin was particularly impressed with the exhibit of the then novel Limoges *faience*, and on her return home she determined to discover, if possible, the method of its decoration. Her first experiments were attempted in the fall of 1877, after having procured colors from Paris, at the pottery of Messrs. P. L. Coultry & Co., where common yellow ware was made. These experiments were conducted under great disadvantages on account of the limited facilities at command. The first piece taken from the kiln, in September, 1877, demonstrated the practicability of the process. In May following some pieces were shown at a local loan exhibition, and others were exhibited in New York in October. Pieces were also exhibited at the Exposition Universelle at Paris in 1879, and received honorable mention.

The success attained by Miss McLaughlin stimulated other ladies to renewed efforts in the same direction, and soon a little colony of workers had sprung up in the Queen City. In April of 1879, Miss McLaughlin gathered around her a number of ladies who were interested in decorative art, and the Pottery Club, which afterwards became an important factor in the development of the ceramic art industry in Cincinnati, was organized, with

Miss McLaughlin, president, Miss Clara Chipman Newton, secretary, and Miss Alice Belle Holabird, treasurer. This was probably the first club of women, organized for such a purpose, in the United States. In addition to those already named, the following ladies constituted the



127.—VASES BY MRS. MARIA L. NICHOLS, 1880.

original membership: Mrs. C. A. Plimpton, Mrs. E. G. Leonard, Miss Mary Spencer, Miss Agnes Pitman, Mrs. Frank R. Ellis, Mrs. Wm. Dodd, Miss Clara Fletcher, Mrs. George Dominick, and Miss Laura A. Fry. Later

the number was increased to fifteen, and finally to twenty. A room was rented in the pottery owned by Mr. Frederick Dallas, on Hamilton Road, where white and cream-colored wares were produced.



128.—PORCELAIN VASE, UNDERGLAZE DECORATION. BY MRS. M. L. NICHOLS, 1878.
CINCINNATI MUSEUM OF ART.

Two kilns for firing underglaze and overglaze ware were erected here, the cost being defrayed by Miss McLaughlin and Mrs. Maria Longworth Nichols. Experiments were prosecuted with greater vigor, and rapid improvement in methods was made, through the intelligent co-operation of Mr. Dallas and his foreman, Mr. Joseph Bailey, now superintendent of the Rookwood Pottery. Mrs. Nichols and other ladies, not members of the Pottery Club,

worked in another part of the building which had been erected by the mother of Anthony Trollope for her country-house during her residence in Cincinnati.

Various styles of work were attempted here during 1879 and 1880.



129.—“ALI BABA” VASE, UNDERGLAZE DECORATION. MISS M. L. McLAUGHLIN, 1880. CINCINNATI MUSEUM OF ART.

Among Mrs. Nichols' best pieces of this period are three vases, shown in Illustration 127, the largest being

thirty-two inches in height, in bold relief and underglaze color. Possessed of rare and versatile talent, she has since produced a great variety of pieces, original in conception, artistic in treatment, and bold in execution.



130.—WHITE CLAY VASE, UNDERGLAZE DECORATION.
MISS CLARA CHIPMAN NEWTON, 1880.

Under the leadership of Miss McLaughlin the Limoges, or *pâte-sur-pâte*, method of painting the surfaces of unbaked pieces with colored slips was employed with

gratifying results. One of the finest of her pieces finished during this period is the "Ali Baba" vase, thirty-eight inches in height, which is made of red clay, decorated under the transparent glaze with colors mixed with white clay (Ill. 129). The design is the Chinese *Hibiscus*, in dull red and yellow on a delicate sage-green ground, daintily blending to a greenish white. Three of these vases were made from the mould, one of which is now in the Cincinnati Museum.

Other members of the club, of whom Miss Clara Chipman Newton was one of the foremost, directed their attention more particularly to 131.—MOORISH VASE, INLAID DECORATION. MRS. C. A. PLIMPTON. CINCINNATI ART MUSEUM.
painting on the biscuit in cobalt blue and other colors, and achieved a marked success. An example of this style, the work of Miss Newton, is here figured (Ill. 130). It is a vase of white clay body, twenty-one inches high, with arabesque design painted under the glaze, and finished with intersecting gilt lines and gold bands at top and bottom, above the



glaze. This was produced in 1880, at the Hamilton Road Pottery, the coloring being a dark, rich blue, clean cut and sharp, without any trace of flowing.



132.—STONE JUG, INCISED DECORATION. MISS LAURA A. FRY, 1881. CINCINNATI ART MUSEUM.

Some of the most original work was produced by Mrs. C. A. Plimpton, whose individuality of style was marked not only in the fine effects obtained in slip-decoration by the use of natural colored clays, ranging from white through yellow and red to dark brown, but in the forms of vessels which she designed. Her incised ornamentation, in which the designs were carved in the green clay, and her inlaid work of contrasting clays, are full of interest. A little

vase in the Cincinnati Art Museum is a good illustration of the latter style, and the first piece of its kind. It is decorated with storks, in native clays,—white and black inlaid upon red. Much of her work was in the Moorish

style, of which Illustration 131 shows an exceedingly artistic example, with pierced handles. This vase was designed by Mr. L. F. Plimpton and decorated by Mrs. Plimpton, and is now owned by the Cincinnati Art Museum. The ground is yellow, with inlaying of red and other Ohio clays and a black clay from Indiana. In the Cincinnati



133.—MISS M. LOUISE McLAUGHLIN.

room of the Woman's Building at the World's Columbian Exposition, this piece attracted considerable attention.

Miss Laura A. Fry also produced some excellent work in etched designs after the Doulton method. A stone jug, with incised decoration, outlined in blue, and made in 1881, is also the property of the same museum (Ill. 132).

Another style, consisting of relief work in parian paste, received attention from several members of the club, notably Mrs. E. G. Leonard and Miss Agnes Pitman. It is not possible to review at length the individual work of each interested worker in this field. All followed out ideas more or less original and each accomplished work of genuine merit. We must refer those who desire to pursue this subject further to the excellent article in the May number of *Harper's Magazine* for 1881, by Mrs. Aaron F. Perry. The Pottery Club continued a successful and harmonious existence until 1890, when, on account of a lack of financial support, it was disbanded by mutual consent. Miss McLaughlin and Miss Newton have continued their work in overglaze decoration, and the former has embodied the results of her investigations in a series of valuable treatises on Pottery Decoration and China Painting.

After the Pottery Club had disbanded, a few of the former members organized a club which they called *The Associated Artists of Cincinnati*, of which Miss McLaughlin became president and Miss Newton secretary. Many beautiful examples of overglaze decoration, as well as metal work, executed by the members of this association, were exhibited at the Chicago Fair, among which some large porcelain vases, artistically painted in dainty colors and gold tracery, will rank with the best professional work.

ROOKWOOD.

It is safe to assert that no ceramic establishment which has existed in the United States has come nearer

fulfilling the requirements of a distinctively American institution than the Rookwood Pottery of Cincinnati, Ohio. For this reason, and because of the additional fact that the founding of this factory was due to the intelligent and well directed efforts of a woman, the history of Rookwood, from its inception, cannot fail to have a peculiar interest for American collectors and patrons of art.

The ceramic display of Japan, at the Philadelphia Exhibition of 1876, inspired the venture which resulted in the establishment of these works, in 1880, by Mrs. Maria Longworth Nichols (now Mrs. Bellamy Storer), whom we have already seen as an enthusiastic investigator and student in some of the Cincinnati potteries. She began her work at the Dallas white-ware pottery, where she and several other amateurs continued for two years. The



134.—OLD ROOKWOOD.

heat being found to be too intense for firing underglaze colors, at the granite ware factory, first suggested to Mrs. Nichols the idea of building a place of her own. Her experiments were continued at the new establishment, which she had erected at 207 Eastern Avenue, and which, through the wise liberality of her father, Mr. Joseph Longworth, was afterwards furnished with the necessary means for its maintenance while its products were finding a market and until financially it could stand alone. The name selected for the works was that of the country place of Mr. Longworth, at East Walnut Hills, in the suburbs

of the city, so called on account of the great number of crows which frequented the adjacent woods. In the more congenial quarters of the new pottery Mrs. Nichols surrounded herself with skilled workmen and able artists, and the first kiln of ware was fired in November of 1880. A specialty was first made of commercial ware for table



135.—MRS. MARIA LONGWORTH STORER.

and household purposes, the principal body used being intermediary between cream-colored and white granite wares. In 1881 considerable quantities of this ware were produced in breakfast and dinner services, pitchers, plaques, vases, wine-coolers, ice-tubs, water-buckets, umbrella jars, and a variety of other patterns, which were

sold either in ivory finish or decorated with underglaze blue and brown prints of birds, fishes, and other animal subjects. These, being artistic in form and now difficult to procure, are much sought for by collectors (see Ill. 136). All of the forms made in white during this period were also furnished in blue, sage-green, and red bodies, which were often ornamented with devices carved in the paste. The border work on white tea-sets was painted



136.—ROOKWOOD PLATE, PRINTED DECORATION.

over the glaze by an Englishman named Broomfield. Yellow ware of a superior quality was also made about the same time.

During the last-named year, Mr. Ferdinand Mersman, at present modeller for the Cambridge Art Tile Works at Covington, Ky., just across the river, designed some fine pieces for the Rookwood works, including a Garfield

Memorial pitcher and several vases with figures in high relief, the latter being modelled entirely by hand and never duplicated. The pitchers, with relief portrait of President Garfield, were made of sage-green clay with "smear" or dull glaze, in two sizes, of which less than a hundred were issued.

While the manufacture of commercial ware was being prosecuted, Mrs. Nichols was engaged in producing works



No. 137.—**LARGE POTTERY BOWL, UNDERGLAZE DECORATION, BY MRS. MARIA L. NICHOLS, 1882. CINCINNATI MUSEUM OF ART.**

of a high artistic order, after the Japanese styles (see Ill. 137). During these earlier years, Miss Clara Chipman Newton was associated with Mrs. Nichols in this work and her refined taste and intense interest contributed in no small degree to the progress which was made at that time. In 1883 Mr. W. W. Taylor became Mrs. Storer's partner in the enterprise and has continued from that time the active manager.

The printing processes were soon entirely abandoned

and table wares were gradually superseded by the more elegant decorative forms which have since attracted so much attention. Methods were adopted which tended to the development of original work and the copying of other wares was entirely discontinued.

The ware produced at Rookwood is a true *faience* and may be classed under three heads: *Cameo*, or shell-tinted ware, generally of a beautiful pink color, gradually



No. 138.—GROUP OF ROOKWOOD VASES.

shading into white, and highly glazed. *Dull Finished* ware, similar in color to the former, possessing a surface soft in texture and having the appearance of being unglazed, but susceptible of being easily cleaned; and lastly, the most characteristic of all, the richly glazed *Rookwood faience*. The distinguishing feature of all of these varieties is the tinting and harmonious blending of the grounds beneath the heavy, transparent, colored glazes, producing

the effect of rich tones of black, yellow, red, olive, green, brown, and amber of great brilliancy, mellowness, depth, and strength.

The highest achievements in glazing are the so-called tiger's-eye and gold-stone, which glisten in the light with a beautiful auriferous sheen. In several pieces which we have seen, the decorator has ingeniously utilized certain iridescent points, where the shining particles of the glaze have concentrated, for the eyes of fishes which have been painted around them. The accompanying engraving (Ill. 138) will give a fair idea of some of the graceful forms of vases produced here, but no adequate conception of the great beauty of the glazing can be conveyed in black and white.

Several distinct bodies are employed, one of which may be described as a true earthenware. It has been discovered by costly experiment that the point of complete or nearly perfect vitrification injures, more or less, the underglaze colors, but in the finer bodies that point is approached as closely as possible to obtain the best results. The chief body now in use partakes of some of the qualities of stoneware and some of the properties of semi-porcelain. A piece of well fired Rookwood biscuit will practically hold water but will absorb more or less of it, and far surpasses regular earthenware in vitreous ring. The clays used are found mainly in the Ohio valley, including a red variety from Buena Vista, Ohio, yellow from Hanging Rock, Ohio, and a white or cream-colored clay from Chattanooga, Tenn.,—artificially tinted bodies being also employed to some extent.



No. 139.—DULL-FINISHED VASE, DECORATED
BY MR. A. R. VALENTIEN. PENNSYLVANIA
MUSEUM, PHILADELPHIA.

The workmen of this factory have all been especially trained in their respective branches. Excepting in the preparation of the clays, no machinery is used save the primitive potter's wheel, which gives more freedom and greater variety to the outlines of vessels than the more mechanical processes of moulding, the shapes produced being mainly variations of classic forms, possessing marked individuality of treatment. Only one thrower is employed at the pottery, and his graceful creations have obtained a world-wide celebrity. Each piece is afterwards passed to a turner, who carefully trims off the surfaces on a lathe which is attached to an old-fashioned throwing wheel turned by a boy.

For the more rapid production of certain standard forms, such as tea-pots, jars, and pitchers, which are still made to some extent, the casting method is practised, being the same as that discovered at Tournay, France, in 1784. This consists in pouring the prepared liquid clay or "slip," into a hollow mould and allowing it to stand for a few moments until the plaster has absorbed the super-abundant moisture from the parts in contact, forming a thin shell of uniform thickness which adheres to the mould after the slip has been emptied out, and is allowed to stand a while longer before being removed.

Mr. Joseph Bailey, now superintendent at the Rookwood Pottery, came to the United States in 1848 from Tunstall, Staffordshire, England. He belongs to a family of potters, one of his uncles being Taylor Booth, son of Ward Booth, both of whom were prominent members of the craft in England during the early part of the present

century. Mr. Bailey entered the pottery of Mr. R. Bagnall Beach in Philadelphia, where he remained for about six months, and afterwards worked for Messrs. Harker and Taylor, of East Liverpool, Ohio. In 1850 he went to Cincinnati, where he has remained almost continuously until the present time. At the death of Mr. Dallas, he assumed supervision of the Rookwood Pottery. His long experience and thorough knowledge of all branches of the art and his extensive experiments with different clays and glazes have contributed in no small degree to the beautiful effects which have made the productions of this factory so well known.

The Rookwood decorations are now entirely under the glaze. The artists employed in this work have, with few exceptions, been educated in the art schools of Cincinnati. Among the most prominent of these are Mr. Albert R. Valentien and Mr. Matt A. Daly, while others are rapidly taking rank among the best American underglaze painters. Mr. Kataro Shirayamadani, one of the exceptions referred to, is a Japanese artist of the best school, and is doing some of the finest work in Oriental



140.—MUG. DECORATED BY E. P. CRANCH.

methods. The late Mr. E. P. Cranch, a well-known lawyer of Cincinnati and an exceedingly clever artist, was connected with the pottery from the first day of its existence, and helped it by his fine taste and criticism, as well as by his excellent work. His old-time humorous sketches in black and brown possess uncommon merit. The quaint style which characterizes his work is perhaps seen at its best in a set of mantel tiles painted by him to illustrate the old American ballad of *Isaac Abbott*, which is a

sample of the traditional lore of New England country life during the eighteenth century, having been handed down from father to son, unrecorded until Mr. Cranch transcribed the air and words, as heard by him, more than fifty years ago, from the lips of a nephew of Dr. Noah Webster, of New Haven, Conn. These, with



141.—TILE FROM ISAAC ABBOTT SET.
PAINTED BY E. P. CRANCH.
ROOKWOOD POTTERY.

the original descriptive designs used on the tiles, were published in booklet form by Robert Clarke & Co., of Cincinnati, in 1886, and dedicated to the Cincinnati Literary Club.

No less meritorious is a similar series of tiles painted by Mr. Cranch, to illustrate the ancient ballad of *Giles Scroggins' Ghost*. He also decorated a variety of other pieces, such as beer-mugs, pitchers, etc., which find a

ready sale. These are generally finished with a "smear" glaze, and present a pleasing contrast to the other productions of this factory. Mr. Cranch died in November, 1892, in his eighty-third year.

While no serious attempt has as yet been made to manufacture art tiles in a business way, experiments have been essayed in this direction from time to time, which have amply shown that the Rookwood methods are peculiarly adapted to the production of artistic tiling for cabinet inserts and mantel facings. We figure a six- by



142.—HAND-PAINTED TILE. ROOKWOOD.

twelve-inch hand-painted tile that was made here recently to show the possibilities in this direction (Ill. 142). The decoration in pure white is applied to a cameo-tinted body, —a pink ground gradually shading into white. The dainty and delicate coloring, the brilliancy of the glazing, and the superior quality of the body, together with the originality of the decorative treatment, point to the early establishment of this branch of the art.

The Rookwood Pottery was the first in this country to demonstrate the fact that a purely American art-pro-

duct, in which original and conscientious work is made paramount to commercial considerations, can command the appreciation of the American public. Owing to the many experiments undertaken, it was operated at an annual loss until the year 1889, when it paid off all its indebtedness and became a financial success. At that time, no longer needing pecuniary aid, it was turned over by Mrs. Storer to Mr. W. W. Taylor, who soon afterwards organized a stock company under the name of the Rookwood Pottery Co. Under the efficient management of Mr. Taylor, the enthusiastic president, rapid strides are



143.—RAM'S HORN FLOWER BASKET. ROOKWOOD.

constantly being made in the improvement of methods, shapes, bodies, and glazes.

A new structure, with all modern equipments, has recently been erected on the summit of Mount Adams, overlooking the city, where, with vastly improved facilities, the capacity of the factory has been greatly increased. Here the kilns are fired with crude petroleum, which insures better and more certain results. A room has been set apart for the especial use of Mrs. Storer, where she can continue her work when so inclined.

Ten years ago Rookwood was scarcely known outside of Cincinnati. To-day its exquisite ceramic creations may be found in almost every home of culture and refinement and in every prominent art museum in the land. The evolution of Rookwood *faience* was the result of a combination of conditions peculiarly favorable to the development of a new art product. It was the conception of a talented woman, representing the third generation of a family widely known in cultured social circles as patrons of the arts, who devoted her rare abilities and her abundant means to the realization of an idea. Fostered by the sentiment of a community long noted as an art centre and rich in private collections of ceramic treasures, aided by the advice of competent critics, assisted by the intelligent co-operation of artisans and artists who came almost at the beginning and have ever since been identified with the gradual development, the venture was peculiarly favored and the result has been particularly gratifying, both to the founder herself and the community to which she belongs. Such were the conditions which operated in combination to perfect the Rookwood pottery



144.—VASE. DECORATED BY MR. SHIRAYAMADANI,
PENNSYLVANIA MUSEUM.

as it comes to us to-day, and without which such results could not have been attained. But we may expect still greater achievements in the future, under the efficient direction of Mr. Taylor, who is devoting his energies to the still higher perfection of underglaze decoration.

The Installation of the Rookwood pottery at the World's Columbian Exposition was the conception of Mr. Taylor. The space occupied by the Rookwood display was bounded on the two sides by heavy walls four



145.—THE NEW ROOKWOOD.

feet high, and three feet in width, faced with large panels of fire-clay body decorated with symbolical and appropriate designs, such as the whirling globe, typifying the potter's wheel, the dragons of fire, and the vase emerging from the glow of the kiln. The walls were of a warm yellow color. On each side rose three slender columns of the same material twelve feet in height, and of a rich malachite green, terminating in flame points of red and

orange. At the back of the enclosure stood a handsome cabinet containing the treasures of Rookwood, such as exquisite pieces of "tiger-eye" and "gold-stone," while on the walls and placed around the enclosed platform were many larger pieces showing the best work of this kind which has thus far been produced. One of the most effective pieces, which was prepared especially for the Exposition, was a large pottery boat of Columbian form, three and one half feet in length, supported on a pedestal artistically modelled to represent the idea of water and waves. The pieces which attracted most attention, however, were some vases and plaques decorated with ideal and grotesque heads, figures of monks, and other designs after engravings and photographs, painted under the glaze. This style of work evinces such a degree of artistic feeling and intelligent treatment of colors as to occasion considerable surprise to all who had the fortune to examine it. Among the foremost of those who have attempted this new style of decoration are Messrs. M. A. Daly, A. Van Briggle, and W. P. McDonald. It is understood that not only fancy heads, but actual portraits, have been attempted with most gratifying results, and the day is not far distant when it will be possible to procure from the Rookwood Pottery painted portraits equal in all respects, and more satisfactory in some, to the oil painting.

THE CINCINNATI ART POTTERY COMPANY.

Mr. Thomas J. Wheatley commenced experimenting in clays and glazes at the pottery of Messrs. P. L. Coultry

& Co., in 1879, and in 1880 established a workshop on Hunt Street, where, under the firm name of T. J. Wheatley & Co., underglaze work was produced to some extent after the style of the Limoges *faience*.

In 1879 a joint-stock company was organized under the title of the Cincinnati Art Pottery Company, of which Mr. Frank Huntington was made president, and Mr. Wheatley continued his connection with the works until 1882, when he withdrew to engage in other business. For several years the company confined its operations to



146.—“HUNGARIAN FAIENCE.” CINCINNATI ART POTTERY COMPANY.

underglaze work, and some of the pieces produced were remarkable for beauty and originality of form and excellence of workmanship. Later, barbotine ware, in applied work, was manufactured for a time, but this was soon dropped for a more artistic style of overglaze decoration on white bodies. The “Hungarian *faience*” made here soon became popular with the purchasing public. The “Portland blue *faience*” was so called on account of the rich dark-blue glaze, of the color of the famous Portland vase, which formed a peculiarly striking ground for gold

decorative effects. The highest achievement of this manufactory, however, and the most distinctive in style,



147.—CANTEEN-SHAPED VESSEL, "KEZONTA" WARE. CINCINNATI MUSEUM.

is the ivory-colored *faience* in the forms of vases and bowls decorated with gold scroll-work and chrysanth-

mums in natural colors. Of the latter several artistic examples may be seen in the Cincinnati Art Museum, including a daintily painted vase of canteen shape (Ill. 147) and a fan-shaped flower-holder or wall piece decorated by Rose (Ill. 148). The name *Kezonta* has been selected to designate these wares. The origin of the



148.—FAN-SHAPED VESSEL, "KEZONTA" WARE.

word is interesting. The trade-mark adopted was the figure of a turtle, and when it was ascertained that the Indian name for turtle was *kezonta*, this was afterwards added to the device and printed on decorated pieces. Pottery in the biscuit, in deep blue and white glazes, has been largely sold to decorators, the forms being generally modifications of the ancient Roman and Greek. Many

ladies found profitable employment in painting these pieces for the market, and it is with regret we learn that the Cincinnati Art Pottery has recently been closed. In design and treatment much of the ware produced here is characterized by originality and a high degree of artistic merit.

Within the past few years other potteries have attempted in Cincinnati to make decorated ware, with varying success. One founded by Mr. Matt Morgan produced a *faience* modelled in low relief in Moorish designs, and a variety of ware with incised designs, touched with color. As a designer he displayed unmistakable talent, and his work was original and strongly characteristic.

The Avon Pottery commenced the manufacture of a ware somewhat resembling the earlier efforts of Rookwood. Dr. Marcus Benjamin, of New York City, possesses a gracefully modelled cup or mug of Avon ware with ram's horn handle, undecorated save in the tinting of the ground, which shades from white to dark pink. Other examples in the collection of the Pennsylvania Museum, Philadelphia, exhibit the same characteristic, a gradual shading of color—pink, olive, light blue, or brown, and some small covered vases are furnished with handles modelled in the form of elephants' heads. Both of the above mentioned potteries were closed after a brief existence.





CHAPTER XIV.

DEVELOPMENT OF THE CERAMIC ART SINCE THE CENTENNIAL.

THE revelations of the Centennial Exhibition set our potters to thinking and stimulated them to greater competition. Never before was such an impetus given to any industry. The best productions of all nations were sent here and exhibited beside our own modest manufactures, and it was only too apparent that America had been left behind in the race. Up to that time there had been a few sporadic instances of attempts at originality, but comparatively little had been accomplished of a really artistic nature. The existence of a true ceramic art in this country may be said to have commenced with the Fair of 1876, because greater progress has been made since that important industrial event than during the two centuries which preceded it. We have already reviewed the wonderful recent advancement of the principal potteries established before the Centennial. We shall now briefly outline the history of those started since, not already mentioned.

Among other prominent American exhibitors at Philadelphia in 1876 were the Empire China Works, Green-

point, N. Y., manufacturers of porcelain hardware and cabinet trimmings; Isaac Davis, Trenton, N. J., white granite and decorated crockery; Messrs. Astbury & Maddock, Trenton, sanitary earthenware and china; Messrs. Yates, Bennett, & Allen, Trenton, table and toilet wares; Brunt, Bloor, Martin, & Co., East Liverpool, Ohio, white granite and decorated table and toilet services; and the American Crockery Co., Trenton, N. J., makers of stone china, bisque, and white granite goods.

BENNETT FAÏENCE.

Mr. John Bennett, formerly director of the practical work in the *faience* department of the Lambeth Pottery of Messrs. Doulton & Co., of London, England, came to the United States in the Centennial year and settled for a time in New York City, where he introduced his method of decorating *faience* under the glaze. He built his first kiln in Lexington Avenue, and afterwards erected others in East Twenty-fourth Street near the East River. At first he imported English biscuit, but after a time he employed potters to make the common cream-colored body, as the tint imparted a warmth to his colors. He also used, to some extent, a white body, made in Trenton, N. J. His work was soon in great demand and brought high prices. The shapes were simple and generally devoid of handles or moulded ornaments. The decorations consisted chiefly of flowers and foliage, drawn from nature in a vigorous and ornate style, and painted with very few touches. A background was worked in after the painting,



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in loose touches and delicate tints, and finally the whole design was boldly outlined in black or very dark color. The glaze was brilliant, even, and firm, and the coloring exceedingly rich, the mustard yellows, deep blues, and browns tinged with red giving the ware a bright and attractive appearance. A cylindrical vase decorated with red and white trumpet flowers impasted on a blue mottled ground (Ill. 149), and a small spherical vase with apple

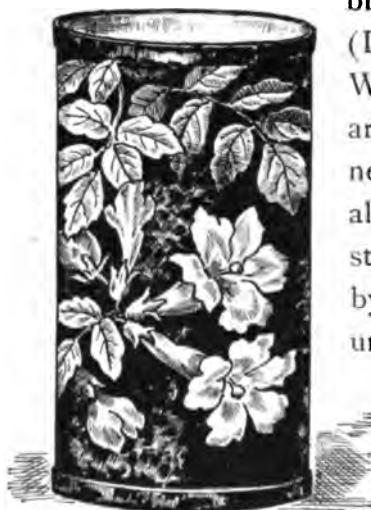
blossoms on a glossy black ground (Ill. 150), in the possession of Mr. William Lycett, of Atlanta, Georgia, are excellent examples of Mr. Bennett's most characteristic work. He also produced some pieces in the style of the so-called Limoges *faience*, by applying colored slips to the unfired clay.

During the half dozen years that Mr. Bennett devoted to this work in New York many attempts were made to imitate his style.

149.—BENNETT FAIENCE.
WM. LYCETT COLLECTION.

It seems proper at this point to quote what Mrs. Aaron F. Perry has written in her paper on "Decorative Pottery of Cincinnati" in *Harper's* concerning Mr. Bennett's relations to the Lambeth Pottery before coming to this country :

"Mr. Bennett's attitude toward Mr. Doulton is so respectful and deferential, and in regard to what he has himself done is so modest, that his own statement in



answer to an inquiry on this point is not without interest. It is as follows : ‘ Your impression respecting Doulton Lambeth *faience* is right. I introduced it, and taught all the pupils, glazed and burned ; but in justice to Mr. H. Doulton, the principal, I must say it is very doubtful whether I would have brought it to the success it attained had I not been engaged by him. His natural good taste and desire to improve in art pottery always had a stimulating effect upon me. You will gather from the above that I think the Lambeth *faience* ought to be called *Doulton* ; at the same time, I have felt slighted by no mention being made of my name in Mr. Sparkes’s paper on Lambeth pottery.’” In his last statement, however, Mr. Bennett is clearly in error, as Mr. Sparkes, in his article, dated June, 1876, distinctly states that about fifty young ladies were employed “at the pottery of the Messrs. Doulton, painting and otherwise decorating the ware, under the immediate superintendence of Mr. John Bennett, the able Director of all the practical work in the Faience Department.”

About 1882 Mr. Bennett sought retirement on his farm in the Orange Mountains of New Jersey, and although he built a kiln there, he has since done but little in the way



150.—BENNETT FAIENCE.
WM. LYCETT COLLECTION.

of *faiience* decoration. The mark used on the earlier pieces was "J. Bennett, N. Y., " and later, "West Orange, N. J."

At Tarrytown, N. Y., a pottery was started about 1878, under the style of Odell & Booth Brothers. They made majolica and *faiience*, decorated under the glaze. A few years ago they closed the works, which, after remaining idle some time, were opened and operated by the Owen Tile Co., manufacturers of decorative tiles.

WHEELING, WEST VIRGINIA.

In November of 1879 the Wheeling Pottery Company was organized, the officers being George K. Wheat, president, William A. Isett, secretary, and Edward Meakin Pearson, general manager. To Mr. Pearson's untiring energy and practical knowledge of the business the success of the company is largely due. In 1887 the same gentlemen organized a new company known as the La Belle Pottery Co., and the same officers were chosen to manage the latter, and in January, 1889, the two companies were merged into one. Mr. Pearson was elected president of the concern a year later, and has held the position continuously until the present time. The products of the original works are plain and decorated white granite ware, while at the La Belle works adamantine china, plain and decorated, is made. The entire plant consists of fifteen large kilns and thirteen decorating kilns, and forms one of the most extensive potteries in the United States. The large decorating department is under the efficient

management of Mr. Charles Craddock, who has been connected with the company since 1882. He is a native of Burslem, England, and was for years in the employ of Messrs. Minton & Co., of Stoke-on-Trent.



151.—Mr. EDWARD MEAKIN PEARSON.

Mr. Edward M. Pearson, the president of the company, was born in Burslem, Staffordshire, England, on May 6, 1848, at which time his father owned the Abbey Pottery at Cobridge, old established works, which, it is said, were built in 1703, where young Pearson afterwards learned the trade. He was admitted to partnership with his father in 1869 under the firm name of Edward Pearson & Son. In 1867 and 1868 the son had visited the United

States in the interest of their English house, which was engaged exclusively in the American trade. The partnership was continued until 1873, when Mr. Edward M. Pearson came to this country to remain permanently, and in July of the same year he went to East Liverpool to ascertain if white ware could be successfully made there. Nothing was then being attempted in that direction save some trials which Messrs. Knowles, Taylor, & Knowles were then making. These gentlemen permitted Mr. Pearson to carry on some experiments in their factory,

which proved highly successful. The citizens of the town offered to donate the land and \$10,000 toward the establishment of a white ware factory if Mr. Pearson would accept the management. Accordingly, in conjunction with Messrs. Homer and Shakespeare Laughlin, Mr. Pearson accepted



152.—MAZARINE BLUE AND WHITE PITCHER.
RAISED GOLD DECORATION. WHEELING
POTTERY CO.

the offer, and in 1874 erected the plant which is now operated by Mr. Homer Laughlin. Several other potteries were afterwards planned and built by Mr. Pearson in East Liverpool, and of the eight which made white ware in that town while Mr. Pearson resided there, to the year 1879, he has been connected with five. In the last-named year he moved to Wheeling, W. Va., as we have already seen, where he has been prominently identified with the pottery industry ever since.

Mr. Pearson is connected on his mother's side with the prominent Meakin family of potters of Staffordshire, England, from which source he receives his middle name.

Although a native Englishman, Mr. Pearson has become thoroughly Americanized and has been prominent in the advocacy of tariff matters before both houses of Congress. He is an active member of the U. S. Potters' Association, has held a number of prominent offices in that organization, and is now a member of several important committees.

THE OHIO VALLEY CHINA COMPANY,

of Wheeling, W. Va., manufacture porcelain in striking shapes and decorations. The exhibit of this company at the World's Columbian Exposition was a surprise to the public. The modelling shows jagged or coarsely serrated edges with points projecting from handles, feet, and prominent parts, somewhat after the style of certain French and German wares. The decorations are of great variety and generally over the glaze, and in many instances handles and zones are perforated in an artistic manner. Fine effects are obtained by moulding Cupids in high relief in irregular alcoves or panels on the sides of vases.

THE STEUBENVILLE POTTERY CO.

In November, 1879, a meeting was called by representative business men of Steubenville, Ohio, to meet Mr. A. B. Beck, an English potter, to consider the matter of forming a joint-stock company for the purpose of manu-

facturing white granite and other wares. The existence of beds of excellent coal within the city limits, and the natural advantages of the location on the Ohio River



153.—“CANTON CHINA” PITCHER.
STEUBENVILLE POTTERY CO.

and the great Pan Handle Railroad system, convenient to the markets of the north and east, decided the projectors of the enterprise in organizing a company under the name of the Steubenville Pottery Company. The necessary buildings were accordingly erected and the first kiln was drawn on February 18, 1881. The present officers are Mr. W. B. Donaldson, president, Mr. R. Sherrard, Jr., vice-president, and Mr. Alfred Day, secre-

etary and treasurer, who has also been for several years the popular secretary of the United States Potters' Association.

About five years ago, coal was superseded by natural gas as a fuel, which insures a superior finish of the ware and better results in the baking. The products of this factory are white granite and decorated ware, in table and toilet services. The works now furnish employment to about two hundred hands, and annually produce \$175,000 of finished goods.

A new departure has recently been made at this pottery



in the adoption of a semi-vitreous, opaque body of a rich cream color and exceedingly light weight, which is called "Canton china." It is made in vases, *jardinières*, and toilet sets, with overglaze decorations on tinted and gold-stippled grounds. A graceful ewer vase, with openwork handle formed of forget-me-nots, is particularly effective. This is sold in a number of pleasing decorations, or furnished plain for decorators, and is already becoming popular on account of being particularly well adapted for this purpose (Ill. 153). The stamp used on the "Beula" pattern, in white granite dinner ware, is an outline map of the State of Ohio.



154.—“CANTON CHINA” VASE.
STEUBENVILLE POTTERY CO.

The Louisiana Porcelain Works of Messrs. Hernandez & Saloy were started in New Orleans about 1880, or possibly earlier, for the manufacture of French china. The ware was made by French workmen, from French materials, and was similar in quality to the Limoges porcelain. It was sold white, but at the time of the closing of the establishment, about 1890, a decorating department was about to be added.

THE FAIENCE MANUFACTURING COMPANY

of New York began in 1880 to make, at Greenpoint, Long Island, pottery decorated with hand-modelled flowers ap-

plied to the surface and painted under the glaze, to which the name barbotine was incorrectly given, this term being

in France used synonymously with "slip" or liquid clay. When the temporary demand for this class of ware had subsided, the company made for a time so-called majolica ware. Plain shapes, without the moulded flowers, were dipped in colored glazes, some pleasing results being obtained by blending the various tints in streaked and marbled effects.



155.—FAIENCE VASE. FAIENCE MANUFACTURING CO.
BY EDWARD LYCKETT.

forty people in painting and gilding imported wares, joined the Faience Manufacturing Company in 1884.

Mr. Edward Lyckett, formerly of Staffordshire, England, who had since 1861 carried on an extensive decorating business in New York City, where he employed from thirty to



156.—PORCELAIN VASE. FAIENCE MANUFACTURING CO.
BY EDWARD LYCETT.

and assumed the direction of the factory. Being a practical potter, as well as an artist of ripe experience, he at once set to work to compound better bodies and glazes and to design new shapes and decorations, and soon began the manufacture of richly embellished pieces, such as vases and other articles of ornamental character. One of the finest examples made at this factory, which is shown in Illustration 155, is a large granite vase, in the Persian style, designed and painted by Mr. Lycett. While entirely covered with rich ornamentation, the effect is subdued and pleasing. The ground is a dark bronze, over which conventionally treated flowers, the poppy on one side and the clematis on the other, are executed in dull tones of color and outlined with raised gold, while the embossed and perforated work, handles, and foot, are covered with gold of different tints. The height of this vase is forty-two inches, and it is claimed that it was sold for probably the highest price yet paid for any single piece of American pottery.

A fine grade of porcelain was introduced by Mr. Lycett, its peculiarity being that, although a true porcelain, entirely devoid of bone, it is fired in the reverse of the usual method, being burned hard in the biscuit and softer in the glaze, in which no lead or borax is present, thus possessing all the advantages, in placing and firing, of a *faience* or earthen body and the superior glaze of hard porcelain. Vases up to twenty-six inches in height were made of this body, which is very white and of a pleasing softness to the eye. The example here figured is modelled and painted in the Moorish style, with openwork handles, collar, and

cover, decorated in raised gold and bronzes of brown, olive, and other tints, on a pale ochre ground (Ill. 156).

A dolphin-handled vase, twenty-eight inches high, is a fine example of artistic treatment. The ground is of a pale ivory tint, on which aquatic plants are painted in subdued tones, enriched and reheightened with veinings and outlines of raised work in gold and bronzes (Ill. 157). This is the work of Mr. Joseph Lycett, a son of the former director of the works. The handles are covered with mat gold and a peculiar dark gold bronze which produces a singularly massive effect. The body is a fine *faience*, which may be described as



157.—FAIENCE VASE. FAIENCE MANUFACTURING CO. BY JOSEPH LYCETT.

a superior quality of white granite ware. Illustration No. 158 represents a fine *faience* vase with painting of "A Flight of Storks" in gold and bronze on an ivory ground. The handles and cover are pierced. The height of the vase is about eighteen inches. The decoration is the work of Mr. Edward Lycett.

In testing various materials for improving the glazes, Mr. Edward Lycett was fortunate in observing effects of iridescence on some of his experiments, which, being continued on new lines, resulted finally in the discovery of a

method of making the reflecting glaze, or *Reflets métallique* of the ancient Persian tiling, which has been so much admired for its brilliant reflections of prismatic and opalescent colors. Specimens of Mr. Lycett's *Reflets nacrés* and *métalliques*, now before me, fully merit the description of the Oriental *Reflets* given by our late Minister to Persia, the Hon. S. G. W. Benjamin, in his book, *Persia and the Persians*, and is a remarkable result of patient research. An example submitted to the South Kensington Museum, in London,



158.—FINE FAIENCE VASE, "A FLIGHT OF STORKS." DECORATED IN GOLD AND BRONZE ON AN IVORY GROUND. FAIENCE MANUFACTURING CO.

was pronounced a "marvellous piece of lustre," and at the late Piedmont Exposition in Atlanta, Ga., a special medal was awarded for tiles treated with this glazing.

Mr. Lycett has also recently sent a few of these tiles to the Technical Museum of Hanley, Staffordshire, England, and in acknowledging their receipt, Mr. William Burton, the able chemist of the Wedgwood works, and lecturer on pottery, writes : "I have just unpacked them and am surprised and delighted with the beauty and perfection of their iridescence. You have rightly named them Persian lustres, for they have exactly the qualities of the old Persian lustered ware, some of which happen to be displayed in an adjoining case."

Mr. Lycett severed his connection with the Faience Manufacturing Company in 1890, when it became the agent in this country for a French manufactory. Mr. Lycett has now retired from active business, but his three sons, Mr. William Lycett of Atlanta, Georgia, Mr. F. Lycett of Bridgeport, Connecticut, and Mr. Joseph Lycett of Brooklyn, N. Y., who have for many years enjoyed the benefit of their father's instruction, are still actively engaged in teaching and decorating.

A pottery was erected at Evansville, Ind., in 1882 by Mr. A. M. Beck, who came from England. He built three kilns and commenced the manufacture of majolica ware. At Mr. Beck's death, two years later, the works were sold to Messrs. Bennighof, Uhl, & Co., who commenced making white ware. In 1891 the Crown Pottery Co. was organized and the plant was increased to six kilns and four enamel kilns. The present products are white granite specialties in table and toilet goods, plain, white, and decorated. The trade-mark used by the company is a crown.

THE CHESAPEAKE POTTERY,

of Baltimore, Md., although among the youngest of the American potteries, has achieved a high reputation for the variety of excellent and novel bodies and glazes it has produced, and has won still greater distinction by the beauty and originality of its designs, both in form and decoration. The works were started in 1881 by Messrs. D. F. Haynes & Co., and were continued without change until 1887, when the style was altered to The Chesapeake Pottery Company, and in 1890 Messrs. Haynes, Bennett, & Co. assumed control and are still operating the pottery with marked success.

Mr. David Francis Haynes, the senior partner, has stood at the head of the business since its inception. He was born in 1835, in the town of Brookfield, Mass., and sprang from a sturdy Puritan race, his emigrant ancestor, Walter Haynes, having landed in Boston, from the ship *Confidence*, in 1638. Mr. Haynes spent his early life on a New England farm, attending the public schools of the vicinity until the age of sixteen, when he entered a crockery store in Lowell, Mass. Here he rose rapidly, and before attaining his majority was sent to England by his employer in charge of an important trust. Possessing a natural taste for decorative work, he displayed at an early age marked talent for construction and ornamentation, and his visits abroad, among the art treasures of England and the Continent, proved a revelation and an education to him. Returning to his native land in the autumn of 1856, Mr. Haynes soon moved to Baltimore

and entered the employ of the Abbott Rolling Mills, a large concern engaged in the manufacture of plate iron. In 1861 he was placed in charge of these extensive mills, in which armor plates for the ironclads were made. At the close of the war he was sent to Virginia to manage a large iron property, where he became interested in the mining of iron ores and clays. In 1871, the offer of an



159.—MR. DAVID FRANCIS HAYNES.

interest in a crockery jobbing house brought him back to Baltimore and to the handling again of the wares for which he had always retained a fondness.

On purchasing the Chesapeake Pottery property, Mr. Haynes entered at once into the congenial work of producing a variety of wares, being greatly aided by the knowledge gained in the jobbing trade of the productions

of the Old World and the wants and tastes of the American people. Finding that but little attention had been paid in this country to original designing for pottery purposes, and that practical, trained modellers, who possessed artistic sense, were difficult to procure, he commenced to design wares for the Chesapeake Pottery himself. The result of his patient study and constant practice are revealed in his wealth of beautiful creations which have been copied extensively both in this country and abroad. No one of our potters has done more to refine the wares for daily household use than Mr. Haynes. He has always held it to be of much greater importance to elevate the quality, as far as possible, of the entire pottery product of the country, than to produce a few fine pieces that should be within the reach of only the wealthy. To make the cup and jug of the plainest home a thing of beauty has been his ruling motive. With this in view, he has been constant in his endeavor to have the United States Potters' Association take up the work of establishing a pottery training school, the benefits of which would be shared by the entire craft.

Mr. Edwin Houston Bennett, the junior member of the firm, is a son of Mr. Edwin Bennett, one of the pioneer potters of this country. The former was born in Baltimore and his business life has been spent in pottery work. His painstaking experiments in the firing of kilns and the making of wares have placed him prominently among the rising practical potters in this country, and made his share in the progressive work which is being done at the Chesapeake Pottery an important one.

When this factory was started, majolica ware was in great demand. Its first product was called "Clifton" ware, and belonged to the majolica family, but was superior in body and glaze, and was pronounced by judges equal to the famous Wedgwood ware of that grade. Following this came the "Avalon" ware, which was of a fine body, of ivory tint and soft rich glaze, ornamented



160.—“SEVERN” WARE. CHESAPEAKE POTTERY.

with sprays of flowers in relief, which were touched with color and gold, making a pleasing decoration. The "Calvertine" ware, made about the same time, was similar in its composition to the "Avalon," but quite different in decorative treatment, being turned upon the lathe, with spaces for bands, upon which were overlaid conventional

relief ornaments, which produced a refined effect when treated with delicate colors and outlined with darker tints of gold.

In 1885 parian wares were produced, with modelled flowers, panels with heads in relief, medallions of Thor-



161.—CASTILIAN AND ALSATIAN SEMI-PORCELAIN TOILET WARE. CHESAPEAKE POTTERY.

waldsen's "Seasons," and similar works, which received the commendations of experts for the mellow tone, sharpness, and rich translucency of the body. Some cattle-head plaques in high relief, modelled by Mr. James Priestman,

from studies of typical animals in the noted herd of Mr. Harvey Adams, were especially praiseworthy.

The most original and perhaps, all things considered, the most refined and beautiful of the various Chesapeake bodies was the so-called "Severn" ware, first brought out in 1885. This was a fine, thoroughly vitreous body of a subtle grayish-olive tint, which was secured, without any artificial coloring, by a combination of American clays and



162.—USEFUL AND DECORATIVE SEMI-PORCELAIN WARES. CHESAPEAKE POTTERY.

other materials. Dr. William C. Prime, author of *Pottery and Porcelain of All Times and Nations*, said of it: "No one who is interested in the art of pottery can fail to note this ware as marking an era in the history of American ceramics."

All of these bodies, excepting the parian, were made into a great variety of useful and ornamental articles, such

style which prevailed about the beginning of the present century. This set was not exhibited until late in January, 1892, but was copied by a celebrated English firm and displayed in their London warerooms in May following,—a decided compliment to American work.

The latest achievements of the Chesapeake Pottery are a line of parlor and banquet lamps, clocks, and large decorative vases, all characterized by originality of design, grace of form, and delicacy of execution.



165.—LAMPS AND VASES. CHESAPEAKE POTTERY.

Mr. Haynes has also recently designed a porcelain "Pompadour" clock case, with Rococo relief ornamentation and finished in rich gold (Ill. 166). It measures fourteen and one-half inches in height.

At the exhibition of American pottery held in Memorial Hall, Philadelphia, in the autumn of 1889, Miss Fannie Haynes, daughter of Mr. D. F. Haynes, entered in competition a large vase which attracted considerable

attention and took one of the prizes, and was afterwards purchased by the trustees of the Museum for the permanent collection. The chief merit of the work lies in the genuine Moorish feeling in the relief ornament and its color treatment, but the Arabic character of the English inscription, "In the History of Pottery Read the Story of the Race," which forms part of the decoration, is particularly marked, and strongly resembles, at a short distance, a real bit of Oriental lettering. Miss Haynes has inherited a fondness for decorative work. She studied in design at the Maryland Institute Art Schools, and afterwards in the Metropolitan Museum Schools in New York, then gave instruction in modelling in the Pratt Institute Schools of Brooklyn, New York. At present she is engaged in making designs for leading manufacturers of silks and silkoline fabrics in New York.

The most important, and perhaps the most artistic, piece of ware thus far produced by Messrs. Haynes, Bennett, & Co. is the "Calvert" vase, shown at the Columbian



166.—PORCELAIN CLOCK. CHESAPEAKE POTTERY.

Exposition for the first time. It measures twenty-eight inches in height and twenty-six in width, including the handles, which are in the resemblance of winged female figures terminating at the base in a richly foliated ornament. The lid or cover of the vase is surmounted by a well executed flame-point, which emphasizes the Renaissance treatment of the entire piece.

Bands of rich relief ornamentation around the neck, on the shoulder, and about the foot and lower portion, enhance the beauty of the fine lines in the form. This vase was designed by Mr. Haynes, and the handles were modelled after ideas of his and under his direction by Mr. Fred E. Mayer, a young man of considerable talent, who



167.—MOORISH VASE DESIGNED BY MISS FANNIE HAYNES. COLLECTION OF THE PENNSYLVANIA MUSEUM OF ART, PHILADELPHIA.

studied under Prof. L. W. Miller in the Pennsylvania Museum and School of Industrial Art, Philadelphia.

Several copies of the "Calvert" vase have been made, and decorated in widely divergent styles. One of these shows a delicate tinting of the handles and all the relief work in a pale marine or turquoise green of mat or satin

finish, enriched with dead gold, the contrast of this combination with those parts of the body and cover that are left white producing a refined and beautiful effect. The entire treatment of the vase is characteristic of Chesapeake Pottery work.

Another example is entirely covered with a rich dark Pompadour red, the raised horizontal lines of the orna-



168.—“CALVERT” VASE. CHESAPEAKE POTTERY.

mentation being overlaid with gold, combining richness and strong color effect with simplicity. A third style of decorative finish is after Worcester methods, the treatment having been left to Mr. Scott Callowhill of Trenton, an artist formerly employed at the Worcester works, who found in this vase a subject worthy of his best effort.

Mr. Haynes has also recently worked out a strong design for a water filter of large proportions, one of the decorations for it being an effective all-over pattern made up of the fleur-de-lis and a quartered rosette, employed alternately, applied in deep underglaze blue.

THE PAULINE POTTERY COMPANY.

In 1883 Mrs. Pauline Jacobus started a small workshop in Chicago under the name of the Pauline Pottery, which consisted of one small kiln and employed a single presser and a couple of decorators. In the spring of 1888 the works were moved to Edgerton, Wisconsin, and considerably enlarged. At present the products of the factory are porous cells for electric batteries and underglaze art ware. Thirteen ladies find employment here, under the direction of Mrs. Jacobus, in painting on the biscuit. On the removal of the works to Edgerton the Pauline Pottery Company was incorporated under the laws of Wisconsin and the business has steadily increased, until at present thirty-five hands are engaged in producing the wares for the market. The decoration of the art wares is entirely underglaze, and the forms of the pieces are ornate and graceful. Ewers, vases, flower jars, bon-bon boxes, candlesticks, lamp stands, and fancy designs are produced to a considerable extent. The painting is done entirely with the brush, frequently in the Japanese style. The body of the ware is light and porous, resembling the ordinary Japanese Kioto ware. The resemblance is particularly apparent in examples in which the

entire surface of the glaze is covered with fine crackling. Modern Italian majolica ware is also imitated here to some extent.

The Onondaga Pottery Company, of Syracuse, N. Y., produce white granite and cream-colored wares, in plain and decorated dinner and toilet services.

The Mayer Pottery Company, of Beaver Falls, Pa.,



169.—PAULINE ART POTTERY, EDGERTON, WIS.

manufacture stone china, lustre band, sprig ware, and decorated goods.

Messrs. Goodwin Brothers operate an establishment at Elmwood, near Hartford, Conn., where they own extensive clay beds. They produce cream-colored, Rockingham, yellow, and terra-cotta goods. The latter include an extensive variety of fancy flower-pots, hanging

baskets, vases, both ornamental and plain for decorators, cupidors, *jardinières*, umbrella jars, and fancy lamp-stands, hand decorated in colored and rustic designs, bronzed, silvered, and lustred. They also have salesrooms in New York City.

The Nashville Art Pottery was making in 1886 a fine red ware with good brown glaze, in artistic shapes. Examples may be seen in the Trumbull-Prime collection, now on exhibition at Princeton College.

The Charles Graham Chemical Pottery Works, Brooklyn, N. Y., one of the most extensive in this country, produce chemical stoneware of every description, porcelain-lined earthenware wash-trays, fire-bricks, and acid receivers up to 500 gallons capacity.

The Akron Stoneware Agency, of Akron, Ohio, of which the Boston Pottery Co. is a branch, manufactures extensive lines of stoneware, Rockingham, and yellow wares, in the usual utilitarian forms, such as jugs, jars, pitchers, flower-pots, bottles, spittoons, and household utensils. In Akron there are fifteen establishments where clay and pottery products are made.

The Warwick China Company was organized in Wheeling in 1887, of which Mr. J. R. McCourtney was the first president and Mr. George Bradshaw, formerly foreman for Mr. Homer Laughlin, of East Liverpool, manager. Mr. O. C. Dewey succeeded to the presidency in the following year, and in 1889, on the resignation of Mr. Dewey, Mr. Charles W. Franzheim, then vice-president of the Wheeling Pottery Company, became president of the Warwick China Company, and still holds that posi-

tion. The products of this factory are semi-porcelain dinner, tea, and toilet ware.

In 1887 or 1888 the West Virginia China Company was established, with Mr. Wm. L. Hearne president and Mr. James Clarke, formerly of the Trenton China Company, manager. This company was re-organized about two years ago under the name of the Ohio Valley China Company (which see).

Summer visitors to Martha's Vineyard are familiar with the peculiar earthenware which is made at the Gay Head Pottery of Mr. W. F. Willard, Cottage City, Mass., which is fashioned in plain vase forms from variegated clays found at the west end of the island. These deposits are bright red, light blue, and drab, and the peculiarity of the ware is that it is not burned, but *sun-dried*, and consequently not intended for use, but merely for ornament. The different colored clays are ground separately, placed together in a ball, and turned into shape, and when partially dry the vessel is shaved and then allowed to harden in the sun. The surface presents the appearance of striped stoneware, without glazing, the bands of red, blue, and slate-colored clays being distinct and remarkably brilliant. Articles are also made from the red clay and burned, but the coloring disappears in the kiln, and consequently much of the ware is sold in an unbaked state to curiosity hunters, in order to preserve the natural hues of the clays. This pottery gives employment to several hands and has been in operation for about fourteen years.

THE LONHUDA POTTERY CO.

An art pottery has been recently established in Steubenville, Ohio, for the manufacture of underglaze *faience*. The firm, which is known as the Lonhuda Pottery Company, is composed of Mr. W. A. Long, chemist, Mr. W. H. Hunter, editor of the Steubenville *Daily Gazette*, and Mr. Alfred Day, secretary of the United States Potters'



170.—LONHUDA POTTERY.

Association. Mr. Long has for some years been engaged in experimenting with clays and colors suitable for underglaze decoration, with a view to producing a high class pottery which should be characteristically American.

The forms of vessels have, in a great measure, been suggested by examples of Chiriqui and other Indian wares

in the collection of the Smithsonian Institution at Washington. In addition to the monogram of the company, which has been used as a factory mark, the impressed figure of an Indian's head has been adopted for use on such pieces as are distinctively American in shape.

The colors used are mixed with clays to heighten or soften the lights, and applied in colored slips to the green body, over the tinted and blended grounds of refined tones of reds, warm browns, yellows, and neutral grays. After the first firing the ware is covered with a brilliant tinted glaze. Foreign clays are used almost exclusively in the body, which is more or less vitreous and of a yellowish color. The product is ornamental rather than utilitarian, consisting mainly of vases, *jardinières*, and small articles for household use. The shapes are simple and graceful in outline, and the decorations are the work of competent artists, among whom is Miss Laura A. Fry, formerly of Cincinnati.





CHAPTER XV.

TOBACCO PIPES.

AS early as 1690 tobacco pipes were made in Philadelphia, as stated in Scharf and Westcott's *History of Philadelphia*. An advertisement appeared in Andrew Bradford's *American Weekly Mercury*, printed in Philadelphia May 12, 1720, worded as follows: "Good long Tavern Tobacco Pipes Sold at 4s. per Gross by a single Gross, and 3s. for a larger Quantity by *Richard Warder* Tobacco Pipe Maker living under the same Roof with Phillip Syng Gold Smith, near the Market Place, where also any that have occasion may have their foul Pipes burnt for 8d. per Gross." These were doubtless similar to the long-stemmed white clay pipes which had been made at Gouda, Holland, and Broseley, England, for upwards of a century. The first tobacco pipes made were fashioned of clay or stone by the aborigines of North America, and Indian pipes were carried to Europe in 1586 to serve as models for the first civilized smoking utensils for the propagation of a savage custom.

The Moravians of Bethlehem, Pa., made clay smoking pipes in the last century, but as to exact form and date of manufacture I have not been able to procure definite

information. Mr. Robert Rau, of that place, is my authority for the statement that plain pipe-bowls, some white and some green, made without stems, were produced by these people probably within the first decade of this century. Long-stemmed pipes seem to have been superseded by bowls about that time, and during the ensuing thirty years or so numerous local potteries throughout Pennsylvania and other sections took up this branch of manufacture.

About the year 1810 Adam Maize, of New Berlin, Union County (then Northumberland), Pa., was making pipe-bowls in the form of a man's head, and prior to 1825, when he quit the business to enter politics, Philip Seebold, who had learned his trade with Maize, made the same style of bowl. The manufacture, however, was continued at both potteries until about 1845, when outside competition caused it to cease.

Previous to 1830 Christian Evil and Charles Zorn had potteries in Berlin, Somerset County, Pa., where they made pipe-bowls in the form of a man's head. Jacob Swope owned a pottery one mile north of Bird-in-Hand, Lancaster County, Pa., about 1820. His son, Zuriel Swope, happened one day when a lad, as he was passing along a street in Lancaster, to see one of the black-glazed pipe-bowls from Berlin in the window of a jeweller's shop, and, attracted by its novelty, went in and purchased it for three cents. He then commenced making similar bowls at his father's pottery. His first mould was constructed of lead, which, proving too soft, was replaced by one made of block tin. He manufactured, without assistance,

as many as three hundred pipe-bowls in a day, which he took to Lancaster and sold for a cent each.

About 1840 Samuel Sturgis was making quite extensively, at Lititz, in the same county, similar pipe-heads, which he sold largely to tobacconists in Philadelphia and other places. These were made in half a dozen different designs, and, being well burned and covered with green,

brown, or yellow glaze, were very popular with the smokers of that day. At an earlier date earthen and stoneware had been made there by Mr. Sturgis and by Joseph Sturgis, his father. The business was discontinued in 1843, on the death of the former. Mr. C. W. Sturgis, his son, residing in Lancaster, informed me that several



171.—GLAZING RACK FOR PIPES.
GIBBLE POTTERY.

of the old pipe-moulds are still in possession of the family.

Some years after the discontinuance of the Lititz pottery, about 1856, John Gibble, of Manheim, commenced to make pipes of red clay, covered with a brown glaze, in the shape of an Indian's head. Mr. Gibble, son of the original owner, is still in the business, and has sent me

several samples of this form, together with one of the hand-made clay racks, furnished with numerous hooked arms, on which the pipe bowls were hung to dry after being glazed, as shown in the accompanying cut (Ill. 171).

In 1858, Mr. J. Richards manufactured white clay smoking-pipes of different lengths and of good quality, in Oxford Street, above Frankford Road, Kensington, Philadelphia. He sent to England for potters who had learned this branch of the art.

Ten years ago, Mr. A. Peyrau, a Frenchman, was making in New York City, light red, unglazed terra-cotta



172.—TERRA-COTTA PIPE HEADS. A. PEYRAU, N. Y. COLLECTION OF JEROME B. GRAY.

pipe heads. These were caricatures of prominent Americans and character sculptures. The modelling was done with boldness and remarkable fidelity to nature. The production of these portrait heads was discontinued several years ago on account of the expense of manufacture and the limited demand for a high-priced article of this nature.

At present there are numerous tobacco-pipe manufacturers scattered throughout the United States, of which

one in St. Louis, Mo., another at Fulton, Ill., and several in Virginia, are probably among the most important.

Short-stemmed white clay pipes were made for the Presidential campaigns of 1888 and 1892, with portrait bowls representing Harrison and Cleveland, by Charles Kurth, of Brooklyn, N. Y.

Excellent pipe clays are found at Hockessin, Delaware, and at other points in Indiana and Missouri, suitable for white pipes, while in the latter State a red clay occurs which is used extensively in the manufacture of red bowls.

Many pipes of early English and Dutch origin have been found in old Indian graves in the United States, including some of the "Fairy Pipes" with diminutive bowls, which were brought to this country by white settlers and traded to the Indians perhaps two hundred years or more ago. Dr. Charles C. Abbott has recently made an interesting discovery of a large number of old Dutch and English clay pipes in the ruins of an old building on an island in the Delaware River.





CHAPTER XVI.

ORNAMENTAL TILES.

THE first wall and paving tiles produced in the United States were probably made at the factory of Abraham Miller in Philadelphia. About 1845 one of his workmen, Mr. Thomas F. Darragh, who, in 1838, when a lad of fourteen, went to Mr. Miller to learn the potting trade and remained with him for twenty years as apprentice and journeyman, now with the firm of Hyzer & Lewellen, of Philadelphia, made for Mr. Miller some Rockingham tiles of large size, probably measuring nine by eighteen inches, which were used for facing the outside of the warehouse. Mr. Darragh also produced some mottled tiles of various colors for paving in front of Mr. Miller's residence, on the north side of Spruce Street east of Broad. Miller was making at that time an octagonal spittoon for the market. By cutting these horizontally in half he procured an ornamental pattern of novel effect which he utilized as wall tiles, by forming a border of them around the ceiling of his office. The idea was original and characteristic of the man.

At the United States Pottery, Bennington, Vt., experiments were made with inlaid tiles in 1853, and a

sufficient number were produced to cover a floor space of seven feet square, underlying the exhibit of this factory at the Crystal Palace Exhibition which was held in New York in that year. These tiles were about ten inches square and made by the wet-clay process. The body was white, inlaid with variegated colors, the designs consisting

of ornamental centre-piece and border with the American flag in each corner. It is not known what disposition was made of this tile floor after the exhibition, and it seems that the difficulties encountered in making these examples deterred the company from continuing experiments further in this direction.



173.—SOME OF THE FIRST FANCY
AMERICAN TILES.
HYZER & LEWELLEN.

Previous to 1872, Messrs. Hyzer & Lewellen, of Philadelphia, were experimenting in floor tiles, and I have before me some interesting examples of these early attempts. Their first efforts

were directed to the manufacture of encaustic tiles of geometrical shapes,—square, diamond, and triangular,—with natural and artificially-colored American clays, mainly buff, red, and black, the designs being inlaid to the depth of about a quarter of an inch. While these attempts proved

partially successful, the wet-clay method employed at that time was unsatisfactory, because the shrinkage was found to be irregular and the pieces came from the kiln of different thickness. The next experiments were made by the damp-dust process, which has been employed ever since. The accompanying illustration will show two forms of geometrical wall tiles which were made previous to 1876. They are plain tiles of yellow clay, of great hardness, the glaze being also hard and entirely free from "crazing," and fully equal in all respects to anything of the kind which has since been produced in this country. The hexagonal specimen figured is decorated with painted designs above the glaze, consisting of a green vine on a buff ground, with a red centre outlined in black. The lozenge-shaped example is painted with a black device on a lemon-colored ground. Later, several patterns of six-inch unglazed mantel tiles, with conventional floral decoration in low relief, were produced, but the manufacture of ornamental tiles was only carried on a short time. At present this firm makes a specialty of plain geometrical floor tiles of different colored bodies and of exceeding hardness. The clay used is fine and homogeneous, and when burned almost approaches stoneware. They also manufacture fire-brick, furnaces, cylinders, dental muffles, and stove-linings. Furnace tests of the standing-up power of the best known fire-bricks, instituted by the Second Geological Survey of Pennsylvania, in 1876, at Harrisburg, showed that the productions of Messrs. Hyzer & Lewellen were superior in heat-resisting qualities to all others that were submitted for examination.

THE LOW ART TILE COMPANY.



174.—A "Low" Tile.

Mr. John G. Low, the founder of the Low Art Tile Works, was born in Chelsea, Mass., in 1835, where five generations of the same name had preceded him. From the age of sixteen until the year 1877 he devoted himself to various lines of

painting, commencing with fresco and decorative work. In 1858 he went to Paris, where he studied with Thomas Couture and with M. Troyon, the celebrated cattle painter, for three years. In 1877 he became deeply interested in ceramic manufactures, and, in the following year, formed a copartnership with his father, Hon. John Low, and at once commenced the erection of a tile manufactory in his native place. Having never seen a tile made in any factory, he began experimenting on purely original lines and soon overcame the mechanical difficulties which presented themselves. A novel method was resorted to in the ornamentation of his earlier productions, which he patented and called the "natural" process. To secure accurate impressions of delicate objects, such as grasses, leaves, laces, etc., the article

to be reproduced was placed on the surface of the lightly shaped and unburned tile and forced into the clay by means of a screw press. On this impression was spread a piece of tissue paper, and over this was piled a quantity of the prepared dust, which was subjected to a second



175.—VIEW OF THE LOW ART TILE WORKS, CHELSEA, MASS.

pressure. The tile, or pair of tiles, of double thickness, was then separated and the paper removed, when the impressions of the objects appeared in relief and intaglio, showing every minute detail of marking. These Mr. Low called "natural tiles."

The method employed in making embossed or relief tiles is that now used by all tile works in this country, which was patented by Mr. Richard Prosser, in England, in 1840, for making buttons, and shortly after applied by Mr. J. M. Blashfield to the manufacture of tiles, called the "dust" process, which consists in slightly moistening the dry, powdered clay and subjecting it to great pressure in dies containing the designs to be impressed upon them. They are then burned and afterwards glazed or enamelled in delicate colors.



176.—AN F. S. A.

In a little more than a year after the works were started, we find this firm competing with English tile-makers at the Exhibition at Crewe, Stoke-on-Trent, which was conducted under the auspices of the Royal Manchester, Liverpool, and

North Lancashire Agricultural Society, one of the oldest in England. There they won the gold medal over all the manufacturers of the United Kingdom for the best series of art tiles exhibited. This record, probably unsurpassed in ceramic history, serves to illustrate the remarkably rapid development of an industry new in America but old in the East, and shows the vast resources at command of the American potter.

In 1883 Hon. John Low retired from the firm and Mr. John F. Low became associated with his father under the style of J. G. & J. F. Low.



177.—PLASTIC SKETCH, BY ARTHUR OSBORNE, "THE MILKY WAY."

Mr. Arthur Osborne, who has designed the majority of the tiles produced here, joined the Lows a few months after they commenced experimenting, and is still connected with the factory. He is a talented and versatile



No. 178.—TILE STOVE.

young artist, whose conceptions are chaste and classic and possess marked originality. Among his numerous designs are ideal heads, mythological subjects, portraits, Japanese sketches, and an almost endless variety of animal, bird,

and floral studies. His "plastic sketches," on a larger scale, are particularly meritorious, some of the most pleasing being a group of sheep in a pasture, a drove of swine entitled "Late for Dinner," a herd of cattle wending their way homeward (Ill. 177), and "The Old Windmill." These are made of plastic clay, called the "wet-clay" process, and vary in size to upwards of eighteen inches in length. A beautiful conceit is the "Fleeting Moments,"



No. 179.—PANEL FOR SODA FOUNTAIN.

in which three cupids hover around an hour-glass, one being depicted in the act of winging his way upwards. In the high-relief tiles the undercutting is done by hand after the designs have been stamped in the press.

The Low Art Tile Co. also manufacture mantel-facings, panels, stove-tiles, calendar tiles, clothes hooks, paper-weights, inkstands, clock cases, candlesticks, bon-bon boxes, and at one time made to some extent ewers

and vases with relief ornamentation, or in plain colors, enamelled and glazed. They at one time also made tile stoves. Lately they have been making a specialty of the manufacture of art-tile soda fountains, in which work Mr. Osborne has found a broader field for the exercise of his talents.



180.—HON. JOHN G. LOW.

A superb fountain made by this firm, and exhibited at the Chicago Exhibition, is probably the most elaborate piece of work produced by them. As an example of tile-modelling it has not been surpassed. The centre panel, measuring about six feet in width by five in height, is arched at the top, and on each side is a smaller panel of

the same form. The design of the central piece consists of a group of human figures in high relief surrounding a fountain, and Cupids form the subject-design of the lateral panels. The delicate olive glaze which covers the tile-work produces a rich and harmonious effect.

The Lows have never imitated other work, either domestic or foreign. They have never made hand-painted, mosaic, printed, encaustic, or floor tiles, and they have never employed men who were trained in other tile works. Consequently their products are characterized by a marked originality, both in style and design, which has caused them to be extensively imitated, both at home and abroad.

THE AMERICAN ENCAUSTIC TILING CO.

was projected in 1875 at Zanesville, Ohio, by a former resident of that place, who, while engaged in business in New York, had succeeded in interesting some capitalists of that city in the manufacture of flooring tiles from Ohio clays. The first experiments not proving satisfactory, Mr. George A. Stanbery, a mechanical engineer, who had been a commissioner to the Vienna Exposition, was engaged to take charge of the works, and through his energy and ability, with the financial aid of Mr. B. Fischer of New York, the president of the company, and his associates, the enterprise was finally placed upon a paying basis.

In 1880 glazed or enamelled tile were first made here. Encaustic or inlaid floor tiles are made by both the plastic

and the damp-dust processes, and the geometrical designs for these are prepared by competent designers, who are employed by the company for this purpose.

Relief tiles are also made here to a large extent, designed by Mr. Herman Mueller, modeller for the company, who studied in the Industrial Academy and Preparatory Art School of Nuremburg, and in the Art Academy of Munich. Special designs have been produced in single



181.—ENCAUSTIC TILE DESIGN.

panels, twelve by eighteen inches in dimensions, of which we have seen some female water carriers of Grecian type. Plastic sketches of large size have also been executed for special orders. Among other styles produced at this factory are imitation mosaic tiles, damask, and embossed damask-finished tiles. By a peculiar treatment, pictures and portraits are also reproduced on a plain surface. This consists in modelling on a smooth surface of clay in in-

taglio and filling the carved portions with a colored glaze, the shadows being regulated by the depth of the carving, the high lights being raised to near the level of the tile. The relative thickness of the glaze produces the corresponding depth of tint, and the effect is that of a photograph or flat picture instead of a design in relief. In this manner ideal heads and faithful portraits have been successfully executed. The method is clearly shown in the accompanying illustration, which represents a six-inch tile in the biscuit state, and the same filled in with glaze, the latter being an excellent likeness of Mr. John Hoge, a director of the company (Ill. 183).

Mr. Karl Langenbeck, the efficient chemist of the works, has had considerable experience in analyzing clays, and has charge of the laboratory of the company, in which experimental tests are made.

In the manufacture of tiles many chemical and mechanical problems are involved, such as the proper selection and combination of clays to insure sufficient cohesiveness to dry without warping or cracking ; the selection of a temperature in burning that will be suitable to all the different clays ; the preparation of a glaze for enamelled tile which will possess the same co-efficient of expansion and shrinkage as the clay bodies upon which it is placed.

In the "dust" process the prepared materials are made



182.—“OLD AGE.”

coherent by the application of enormous pressure, which, in this factory, is obtained by mechanical presses, automatic in action, which are controlled by the company, and constructed in the machine shops connected with the works.

Some of the most artistic productions of this factory



183.—INTAGLIO PORTRAIT.

MODELED TILE.



184.—SIX- BY EIGHTEEN-INCH PANEL—“SWALLOWS.”

are the eight, ten, and fifteen tile facings, with raised designs of classic female and child figures.

Before the new works were finished, eleven large kilns were in operation. Recently the producing capacity has been very largely increased by the addition of twenty-eight

kilns, which have been built on a tract of thirty-five acres in the city of Zanesville, making in all thirty-nine kilns.

The new works are located on the western bank of the Muskingum River, in the northern part of the city, and



185.—TWELVE- BY EIGHTEEN-INCH PANEL—“SUMMER.” DESIGNED BY MR. HERMAN MUELLER.



186.—TEN-PIECE PANEL—SIX-INCH TILES, 12 X 30 INCHES. DESIGNED BY HERMAN MUELLER.

consist of twenty-four separate buildings. They were formally dedicated on the 19th day of April, 1892, when the schools of the city were closed, and the business of



187.—FIFTEEN-PIECE TILE DESIGN, 18 X 30 IN. BY HERMAN MUELLER. AMERICAN ENCAUSTIC TILING CO.

the place entirely suspended, the citizens giving themselves up to the celebration of the event. A handsome souvenir tile was designed for this occasion by the company, of which fifteen thousand were distributed.

This company has recently produced a new style of unglazed floor tiling, in elegant designs and attractive coloring, which is designated by the name and trademark of "Alhambra." Beautiful soft effects in carpet patterns have been obtained on a vitreous body of great hardness. The tinted arabesque designs are inlaid to the depth of about one eighth of an inch, simulating mosaic work.

THE STAR ENCAUSTIC TILE COMPANY.

The experimental period of the present Star Encaustic Tile Company, Limited, of Pittsburgh, Pa., dates back at least twenty years. In 1876 a factory was built by the Pittsburgh Encaustic Tile Company, Limited, which was merged into the present concern in 1882. The products of this factory are gas-burned, unglazed encaustic tile for geometric and tessellated pavements, floors and hearths. The great variety of shapes and colors admits of almost unlimited combinations, resulting in rich and pleasing effects. Mr. John C. Alrich is chairman of the company and Mr. Samuel Keys manager.

THE UNITED STATES ENCAUSTIC TILE COMPANY

of Indianapolis, Ind., was organized soon after the Centennial Exposition with Mr. J. G. Douglass, president, Mr.



188.—VIEW OF THE NEW WORKS OF THE AMERICAN ENCAUSTIC TILING CO., ZANESVILLE, OHIO.

W. W. Lyon, secretary and treasurer, and Mr. F. H. Hall, superintendent. The building soon afterwards burned down and larger and more suitable ones were erected in 1879. In 1886 the present management purchased the business and changed the name to the United States Encaustic Tile Works. The plant now includes six biscuit and twelve muffle kilns, the products being plain, encaustic, enamelled, and relief tiles for flooring, mantel facings, wainscoting, hearths, and other interior decoration. The clays used for white bodies come from South Carolina and Kentucky, and those for dark bodies are obtained from Indiana. The burning is done by means of natural gas. Miss Ruth M. Winterbotham, who models for this manufactory, has produced many beautiful designs, notably some three- and six-section panels. A series of three mantel panels, representing Dawn, Midday, and Twilight, are particularly deserving of mention. Recently this factory has produced some effective tiles in raised blue designs on a white ground. Mr. Robert Minton Taylor, of England, was connected with these works from 1881 to 1883. The present officers are Mr. John J. Cooper, president, Mr. Jackson Landers, vice-president, and Mr. John Picken, secretary and treasurer.



189.—SIX-INCH RELIEF TILE.
U. S. ENCAUSTIC TILE WORKS.

In the Woman's Building, at the Chicago Fair, Miss Winterbotham exhibited a series of tiles and panels which she had designed and modelled for this company. A panel measuring perhaps fifteen by eighteen inches, decorated with three well executed female figures in relief, apparently representing the March zephyrs, attracted considerable attention, as did also a circular tile plaque, fifteen inches in diameter, with relief design showing a frontier scene with wood-chopper, bison, mountains, and setting sun.

THE TRENT TILE COMPANY.

In 1882, the Harris Manufacturing Company was organized for the production of tiles, and shortly afterwards the name was changed to the Trent Tile Company. In 1883 Mr. Isaac Broome, who had formerly been connected with the Etruria Pottery, of Trenton, returned to that city from the West to accept the position of designer and modeller for the new company. He continued in this capacity for about two years, during which period he stocked the works with many excellent designs, some of which are still being produced there.

The Trent Tile Company is now making a specialty of dull-finished or "Trent finished" tiles in alto-relievo, which are treated by the sand-blast process after being glazed. The effect is a soft, satin-like finish, exceedingly pleasing to the eye. The process is protected by patents. This style of finish forms a striking contrast to the glazed and enamelled varieties also made here, of which effective panels, six by eighteen inches, in one piece, are manufac-

tured extensively. Larger tiles have also been produced here for special work, some of them being twelve by twenty-four inches. The company has also recently been making soda-water fountains with modelled panels.

Over twenty kilns are at present operated by the Trent Tile Company, including six round biscuit kilns, and upwards of a dozen enamelling kilns. The English muffle kilns are used for enamelling, but the firing is done at a pretty high temperature. The present officers of the



190.—BACCHANALIAN PANEL. NINE BY EIGHTEEN INCHES. DESIGNED BY
MR. W. W. GALLIMORE. TRENT TILE WORKS.

company are Mr. Benjamin F. Lee, president, Mr. Alfred Lawshe, treasurer, and Mr. DeWitt C. McVay, manager.

In 1886, Mr. William Wood Gallimore became designer and modeller for these works, having previously acquired an enviable reputation as a modeller of portrait busts and vases. Mr. Gallimore is an Englishman with thirty years' experience as a potter and designer. His father, Mr. William Gallimore, was an artist, engraver, and color maker, and under his instruction the son ob-

tained a complete knowledge of the manufacture of potters' colors. The younger Gallimore began his career in the office of Mr. John Ward, solicitor, Burslem, Staffordshire, and his evenings and leisure hours were devoted to the study of art in the Art School of Stoke-upon-Trent. While in the law office he executed his first model, a group of figures, representing a Neapolitan fisherman and family, after an engraving which appeared in the *Illustrated London News*. This work attracted consider-



191.—NINE- BY EIGHTEEN-INCH PANEL.—FISHING BOYS. DESIGNED BY W. W. GALLIMORE. TRENT TILE CO.

able attention among the artists of the district, and Mr. George Reade, a modeller of reputation, at once tendered the young artist a position in his studio at Burslem, which was accepted. Here, under Mr. Reade's instruction, young Gallimore became proficient in modelling pieces of useful ware, and was entrusted with much of the outline drawing for the establishment. On Mr. Reade's retirement from business, his pupil continued his studies

in figure modelling under M. Louis Kremer, a French artist of ability. Subsequently Mr. Gallimore became connected with a number of the prominent potteries in England. For six years he was at the Belleek potteries in Ireland, where he lost his right arm by the bursting of a gun. He afterwards was commissioned by Mr. William Henry Goss, proprietor of the London Road, Stoke-upon-Trent, potteries, an eminent author, to execute some busts of prominent Englishmen, which were afterwards produced by Mr. Goss in fine parian. These portrait busts were pronounced admirable likenesses of the originals, including a head of the late Mr. Llewellynn Jewitt, which serves as the frontispiece to the latter's *Ceramic Art of Great Britain*, a bust of Mr. S. C. Hall, editor of *The Art Journal*, another of the present Earl of Derby, and one of the Earl of Beaconsfield.

Since the loss of his arm, Mr. Gallimore has done his modelling with his left hand, and he has accomplished better work with one arm than he did when in possession of both. All of the designs produced by the Trent factory during the past six years are his work, the dies being made in his workshop by his son, under his supervision. Mr. Gallimore is a versatile and prolific sculptor, and an artist of fine ability. His style is vigorous and characteristic; his portrayals of boys and Cupids are especially pleasing. Among the more pretentious of his recent productions are a finely modelled coat-of-arms of the State of New Jersey, designed for architectural embellishment, and a six-foot panel with figures in relief. In addition to his work for the Trent Company, he has designed some of the

best vases and other pieces for the Ceramic Art Company of Trenton, makers of Belleek china, and other establishments. The tile portrait which forms the frontispiece to this volume was modelled and kindly volunteered by Mr. Gallimore, and is pronounced an excellent likeness.

Mr. William Gallimore, the father, was a designer and engraver of the old school, and did considerable work for the Wedgwoods, Enoch Wood, John Alcock, and other English potters. He died at his son's house in Trenton, N. J., in 1891, aged eighty-four, the last piece of work which he did, a short time previous to his death, being a chrysanthemum design for transfer printing, for the house of J. E. Jeffords & Co., Philadelphia. Among his papers he left a large and interesting collection of proofs from the original copper plates which he and others had engraved for the above named firms during the first half of the present century, together with many of the original drawings from which the engravings were made, and some proofs of curious old engravings for "bat-printing."

Mr. W. W. Gallimore's sons, William and Jesse, have recently commenced business on their own account, under the supervision of their father, as designers and modellers of useful, ornamental, and figure subjects,—the sons having inherited the artistic talents of their father and grandfather. Miss Flora and Miss Marian Gallimore, the daughters, are also clever modellers of floral designs for applied ornamentation, and have done considerable work of this character.

THE PARK PORCELAIN WORKS.

In 1884. Mr. H. R. Mitchell, of the Park Porcelain Works, West Philadelphia, experimented in glazed relief tiles, examples of which are on exhibition in the Pennsylvania Museum of Art. He modelled a number of designs from natural objects, such as leaves and turtle-shells, the latter being exact reproductions, both in form and coloring, of the original models. The manufacture does not seem to have advanced beyond the experimental stage, although the workmanship was creditable and some of the glazes excellent.

THE PROVIDENTIAL TILE WORKS.

of Trenton, N. J., were projected about 1885 and the first goods were turned out in the spring of 1886. Mr. Isaac Broome, who had previously been with the Trent Tile Company of the same place, was the first designer and modeller of the new establishment, and some of his designs are still being produced.

The products of this factory are glazed tiles, plain and in relief. At one time embossed tiles were made in two colors, the raised ornamentation being of a different color or tint from the ground, and some good results were obtained by this treatment. Underglaze decoration was also employed for a time, but both styles were abandoned as being unsuited to the American market. The present output consists principally of embossed tiles for mantels, hearths, and wall decorations. Some of the newest

designs are relief tiles, measuring six by twelve and six by eighteen inches, and among the most popular pieces are hunting panels for mantel facings, with representations of fighting bucks, stag's heads, sportsmen, and dogs.

The present designer and modeller is Mr. Scott Callowhill, recently, for a short time, connected with the Phœnixville (Pa.) pottery. He came to this country in



192.—RELIEF PANEL—“MIGNON.”
BY SCOTT CALLOWHILL, AFTER
LEFEBVRE.

1885, from the Royal Worcester works, England, where with his brother, Mr. James Callowhill, now of Roslindale, Mass., he had charge of two of the principal decorating-rooms in which the finer class of decoration, in raised paste and gold bronze, was done. He also while in England worked for the Doultons at Lambeth. Mr. Callowhill has recently executed some artistic panel designs, one of which is a six- by twelve-inch tile, “Mignon,” after Jules Lefebvre, and another, a six- by eighteen-inch piece, after

Mr. Benjamin W. Leader’s picture, entitled “February fill Dyke,” in intaglio. This panel is glazed in a single color and is one of a set of three intended for a mantel facing.

Among the latest productions of this factory are gilded and decorated tiles in the style of the Royal Worcester *cloisonné*, exceedingly rich and pleasing in effect. One

variety consists of raised designs, glazed and outlined in gold, the relief portions being finished in shades lighter or darker than the ground, while another style possesses arabesque reliefs painted in delicate overglaze colors and



193.—INTAGLIO—"FEBRUARY FILL DYKE." BY CALLOWHILL, AFTER LEADER.

gold against glazed grounds of white, ivory, pale pink, and French gray shades. The general effect is that of metal *cloisonné*. The works are under the management of Messrs. James H. Robinson and C. Louis Whitehead.

THE BEAVER FALLS ART TILE COMPANY, LIMITED.

of Beaver Falls, Pa., was organized in 1886 by Mr. F. W. Walker, who is secretary, treasurer, and manager.



194.—BEAVER FALLS STOVE TILES.

The works started with the manufacture of plain enamels, and a few months later added embossed and intaglio tiles,

as well as tiles for stove decorations, of which this company has since made a specialty. The discovery of natural gas and the advantages to be obtained by its use as a fuel for the burning of all pottery wares was the inducement for Mr. Walker, who had been very much interested in the investigation of tiles and their manufacture, to organize the company, and his ability as a chemist soon enabled him to place the works in a position to manufacture a line of glazes of soft, rich tones, and their remarkable freedom from crazing soon won for the factory a high reputation in the trade.

Their delicate tints of pale blue and greenish and purplish grays are particularly beautiful examples of transparent colored glazing.



195.—SIX-INCH RELIEF TILE—
“SAPPHO.” BY BROOME.

These works have always employed the best designers that could be obtained. Prof. Isaac Broome, a sculptor of rare artistic ability, became connected with the factory in 1890. Among his most highly admired pieces is a six-inch tile with a classic female figure (Sappho) in relief, leaning on a harp.

The factory is now making a specialty of artistic tile designs suitable for solid wall decorations, in all the leading styles, for libraries, dining-rooms, and bath-rooms. One of the most chaste patterns recently produced is a dado in Romanesque style, of which a section is here represented (Ill. 198). The examples figured are char-

acteristic illustrations of the geometric, floral, and figure embellishment of the Beaver Falls productions.

A circular four-and-a-half-inch likeness of Mrs. Grover Cleveland was executed here a few years ago, which is an excellent example of tile portraiture. Among the most recent productions of the works are a series of six- by eighteen-inch panels, representing Poetry, Music, and Painting (Ill. 197), and some twelve- by twelve-inch heads, including one of Washington.

Prof. Isaac Broome is one of America's most versatile artists. He was born at Valcartier, Quebec, on May 16, 1835. He first became interested in the subject of ceramics when, as a young man, he visited the museums of Europe to study the collections of Grecian and Etruscan vases for archæological material for use in his chosen professions of sculpture and painting. After some years he turned his attention to the potter's art, and about the close of the Civil War he established a terra-cotta manufactory at Pittsburgh, where he made vases, fountains, and architectural designs. His productions, however, were in advance of the public taste, and the venture had to be abandoned. After a period of portrait-painting, frescoing, sculpturing, and modelling, he started architectural terra-cotta works in Brooklyn, N. Y., about 1871, and produced some large pieces of artistic work, but he was finally compelled to



196.—PASSION-FLOWER
PANEL.
BY BROOME.

relinquish this second enterprise by the arbitrary ruling of the city Board of Health which, under the pretext that the firing of his kilns endangered the safety of the adjacent buildings, ordered him to close the works.

Just previous to the Centennial, as we have already seen, Mr. Broome was engaged by the Etruria Pottery of Trenton, N. J., to prepare some special designs for the

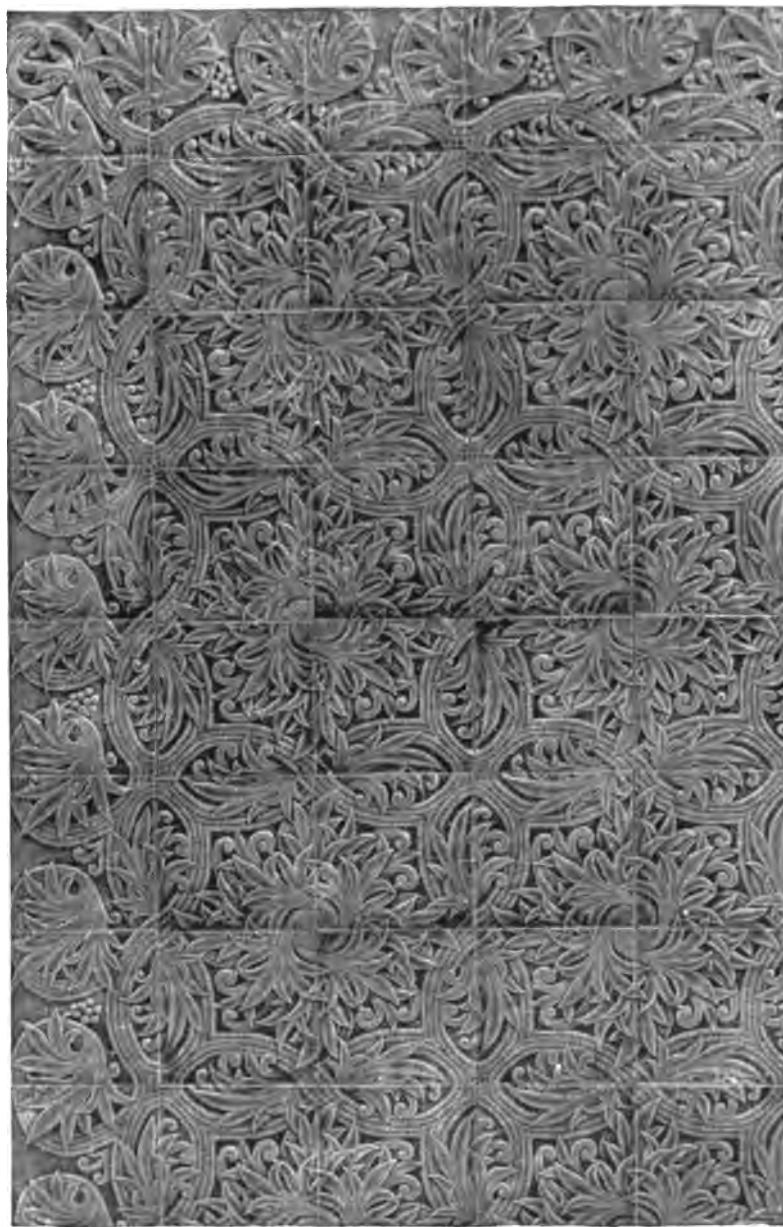


197.—RELIEF PANEL—

“MUSIC,” FROM
PAINTING, POETRY,
AND MUSIC FACING.
BY BROOME.

approaching exhibition. In 1878 he was appointed a special commissioner on ceramics to the Paris Exposition, and, in conjunction with General McClellan, made a thorough study of the ceramic art as it exists abroad. While connected with the Ott & Brewer Company at Trenton, he made some original drawings on stone for some special and general work which were printed in black, in colors, and in gold, said to be the first lithographic printing on pottery ever done in America.

In the year 1880, on his return to Trenton from abroad, he utilized the time in recovering from an attack of illness in putting into practical application some ideas which he had previously thought out in the production of a variety of ware never before attempted in this country. The body was a well vitrified porcelain with underglaze color effects, the paste, colors, and glaze being thoroughly incorporated together by a single firing. The result was a ware difficult to describe, but most pleasing in its modest



198.—DADO IN ROMANESQUE STYLE. BEAVER FALLS ART TILE CO.

tones and the softness and depth of translucent effect. Only about one hundred of these vases were made, for the most part of small size, ranging from three to ten inches in height, the forms being simple but full and rich in outline, and particularly adapted to the peculiar style of coloration in analogous or contrasting harmonies. These pieces were made entirely by Prof. Broome, assisted by his young son, the clays being prepared in the basement of his residence, dried in plaster moulds in the sun, thrown, turned, glazed, and colored on the green clay in a second-story room, and finally taken to Davis' pottery in Trenton and fired in a regular ware kiln. All of these interesting pieces were sent to a dealer in New York and scattered in collections throughout the country (see chapter on Marks).

In 1883 Mr. Broome became connected with the Harris Manufacturing Company, now the Trent Tile Company, as designer and modeller, and afterward, in 1886, was instrumental in establishing the Providential Tile works, of Trenton, and designed many of their best works. He is an indefatigable worker and a prolific artist, his sculptures being characterized by exquisite conception and the most painstaking execution of details.

Among the more important works of Prof. Broome are a marble bust of Dr. Ducachet, in a niche in St. Stephen's Church, Philadelphia, executed in 1858; a semi-colossal marble bust of Washington in the Philadelphia Club-house, Thirteenth and Walnut streets, made from the most authentic portraits in the same year; and a ceramic bust of Hon. Joseph D. Bedle, New Jersey's Centennial Governor, now in the State Library at Trenton.

THE CAMBRIDGE ART TILE WORKS

were established at Covington, Kentucky, in March of 1887, by Messrs. A. W. Koch, F. W. Braunstein, and Heinrich Binz, all of Cincinnati, for the manufacture of enamelled and embossed tile, since which date the plant has been enlarged from year to year to accommodate the constantly increasing business. These works are producing to-day an extensive line of high-grade art goods of various shapes for interior decoration—friezes, moulding, and



199.—“KING LEAR.”

mantel facings—ranging in size from one half inch square to six by eighteen inches. In addition to relief work for mantel and wall decoration, the intaglio treatment has also been employed to some extent, whereby photographs may be reproduced with good effect by filling in the depressions with colored glazes. Imitation mosaic work is also a specialty of this factory. The glazes used on the various productions are remarkably free from crazing.

From a large number of excellent designs we have

selected for illustration a six-inch head, representing King Lear, which was modelled by Mr. Clem. Barnhorn, who recently received the European scholarship offered by the Cincinnati Art School.



200.—“WINTER.” MODELLED BY MERSMAN.

The principal designer and modeller for the works is Mr. Ferdinand Mersman, formerly connected with the Rookwood Pottery of Cincinnati, who studied at the

Academy of Fine Arts in Munich. One of his designs, a six- by eighteen-inch panel, representing Winter, is here figured, and of his more pretentious works we give an illustration of a ten-piece design entitled "Daughters of the Sea."



201.—"DAUGHTERS OF THE SEA" FACING. MODELLED BY MERSMAN.

THE MENLO PARK CERAMIC COMPANY

was started at Menlo Park, N.J., in October, 1888, by Mr. J. T. Smith and Mr. Charles Volkmar, for the manufacture of art tiles and other interior ceramic decorations.

Mr. Volkmar, who came from Baltimore, Md., springs from a family of artists. His father's reputation as a portrait painter and restorer of pictures is well known, and his grandfather was an engraver of considerable prominence. The younger Volkmar began his art studies in his native city, and as early as 1859 attracted attention as an etcher of merit. Before reaching his majority he went to Paris and studied under Harpignies and others. Here he remained for a number of years, acquiring an enviable reputation as an animal and landscape painter in oils and water

colors, and his works were exhibited in several of the salons. During this period he became greatly interested in the Limoges method of underglaze painting in clay, and, entering a pottery in one of the suburbs of Paris, devoted himself to the study of the various processes of manufacture, the composition of glazes, and the mysteries of the kiln. Later he became connected with other potteries, in the capacity of an ordinary workman, and in this manner acquired a knowledge of the art of underglaze decoration which could not have been obtained in any other way. Returning to America about 1878, he built a kiln at Greenpoint, Long Island, and subsequently another at Tremont, near New York City, where he began to make decorated tiles and art pottery. The "Volkmar *faiience*" of that period was of the same character as the Haviland slip-decorated ware. In 1883 he produced a limited number of so-called "barbotine" vases, decorated on plain surfaces or modelled in relief. His process differs from that in vogue elsewhere, in that the colors are applied to the thoroughly dried surface of the unbaked ware instead of to the moist or green clay, by which method he claims that he can obtain better results in the avoidance of unequal shrinkage of the body and the securing of greater brilliancy of effect.

Recently Mr. Volkmar has been devoting himself to architectural work. One of the most important pieces of special work executed by him in the last two years is the interior decoration of the William Rockafeller mansion at Tarrytown, N. Y., consisting of enamelled terracotta, or *faiience*, in a vestibule with groined arches and

loggia, the latter embellished with a five-foot frieze, heavy cornice, and panelled ceiling. This work was modelled after special designs of the architects, Messrs. Carrere and Hastings. The style of decoration is Italian Renaissance



202.—PORTION OF FIVE-FOOT FRIEZE IN LOGGIA OF THE
ROCKAFELLER MANSION, TARRYTOWN, N. Y.

in high relief, the color of the enamel being in such perfect harmony with the wainscoting of Tennessee marble that at a short distance no difference in shading is per-

ceptible. This terra-cotta body is white in color and of a somewhat sandy nature, fired hard, and covered with a glaze or enamel.

Mr. Volkmar's method of decorating tile consists in the use of enamels instead of transparent glazes, which he is able to shade to the most delicate and subdued tints, to match any variety of marble, onyx, or other material. His "old gold" and "old ivory" are just now particularly popular for decorative purposes, to harmonize with the light furnishings which have recently been revived.

Another peculiarity of his tiles is the employment of slightly relieved lines, to indicate the design, in place of high-relief effects, which are often decorated in two shades of the same color, or in two harmonious colors of low, broken shades.

Some of Mr. Volkmar's tile work may be seen in the ceiling of the Boston Public Library, in light gray-blue coloring. In the Market and Fulton National Bank building, New York City, over eight thousand six-inch Volkmar tiles were used for wall decorations, in Romanesque style, the color scheme being old ivory, pale blue, and light maroon. Mantel facings and hearths, with raised designs, of artistic conception, finished in old ivory and gold, have also been made by Mr. Volkmar for many of the residences of prominent people.

Mr. Volkmar has taken steps to organize a new company, which will be established in Menlo Park, to be known as the Volkmar Ceramic Company. The manufacture of artistic tiling will be a specialty of the new

establishment, as well as high-grade architectural clay work of every description.

The Menlo Park Ceramic Works are still being operated by Mr. J. T. Smith.

THE ROBERTSON ART TILE COMPANY

was formed at Morrisville, Pa., opposite Trenton, N. J., in 1890, by Mr. G. W. Robertson, who had been assistant manager at the East Boston Pottery from 1865 to 1871, and for several years afterwards associated with his father and brothers, James Robertson & Sons, at the Chelsea



203—PANEL AFTER THE FRENCH. ROBERTSON ART TILE CO.

Keramic Art Works, Chelsea, Mass., and from 1878 to 1890 connected with the Low Art Tile Works, of the same place. Morrisville was selected for the new venture by reason of its many natural advantages. The new factory was called the Chelsea Keramic Art Tile Works, and Mr. Robertson became general manager for the company.

The business started with the manufacture of a fine grade of glazed brick, and for some time plain enamelled

wall tiles have been produced. The glazes and enamels are of most excellent quality and remarkably free from a



204—PANEL MODELLED BY
H. C. ROBERTSON AFTER
DORÉ.

tendency to craze, and the color scale possesses a wide range. A specialty is the manufacture of rough tiles with stucco finish for interior decoration. Recently some excellent etched and relief art tiles have been made, of which two six-by twelve-inch panels are here illustrated, one of which, in high relief, is a reproduction, probably, of a French design. The other, in low relief, was modelled by Mr. H. C. Robertson of Chelsea after one of Doré's illustrations of La Fontaine's fables.

THE COLUMBIA ENCAUSTIC TILE COMPANY,

of Anderson, Indiana, manufacture natural-gas burned tiles, their specialty being plain enamelled tiles. Inlaid floor tiles and, to some extent, embossed tiles for mantels and ornamental purposes are also made here. Of the latter some twelve-by thirty-inch panels are now under experiment. The officers of the company are Mr. B. O. Haugh, president, Mr. George Lilly, vice-president and treasurer, and Mr. Samuel Hughes, secretary.

Some of their best six-inch designs are those with boy figures representing the seasons, and some children's heads. A mantel facing representing "The Return of the Swallows" is worthy of notice.

THE C. PARDEE WORKS,

of Perth Amboy, N. J., produce front, fire, and paving brick, salt-glazed sewer pipe, and, to a more limited extent, floor and glazed tiling. Recently art tiles for wall decoration have been made here, the latter including some intaglio modelled heads of Emperor William, Ex-President Benjamin Harrison, President Grover Cleveland, and other celebrities. Seven tile kilns are now in operation and greater attention will hereafter be given to this branch of the business. Some superior hand-painted underglaze tiles of pleasing designs have been produced by way of experiment and it is the intention of the man-



205.—THE WILKES SCREW TILE PRESS.

agement to commence the manufacture of printed underglaze and overglaze goods in the near future. Recently these works commissioned Mr. W. W. Gallimore to execute some new designs which are now being produced.

In the manufacture of printed, inlaid, and relief tiles, America has advanced rapidly, but in the production of hand-painted art tiles she is sadly deficient. This is a branch of the art that must be developed through the influence of our mechanical art schools, which are paving the way for an early revolution in the ceramic industry in the United States.

Various tile machines have been designed for the manufacture of tiles from dust or semi-dry clay, but we are unable here to reproduce more than one. Illustration 205 shows a screw press, made by Mr. Peter Wilkes, of Trenton, for the Trent Tile Company, and will give an excellent idea of the principle on which the majority of such machines are operated. This forms tiles six inches to twelve inches square, the die being placed between the "push-up" and "plunger." It can also be used for making plates, oval dishes, and other wares.





CHAPTER XVII.

ARCHITECTURAL TERRA-COTTA.

IT is interesting to note what the fifth edition of the *Encyclopædia Britannica*, published in 1815, contains relative to this subject : "Worlidge, and others after him, have endeavored to excite brick-makers to try their skill in making a new kind of brick, or a composition of clay and sand, whereof to form window-frames, chimney-pieces, door-cases, and the like. It is to be made in pieces, fashioned in molds, which, when burnt, may be set together with a fine red cement, and seem as one entire piece. The thing should seem feasible." And so we shall find that it was.

Terra-cotta, the most enduring of all building materials, has been used to a greater or lesser extent from a high antiquity in continental Europe, and in England terra-cotta trimmings were used in building as early as the fifteenth century. In the United States this material does not seem to have been introduced until after 1850. Experiments were made in this direction in 1853 by Mr. James Renwick, a prominent New York architect, but the innovation was not received with favor by builders. In 1870 the Chicago Terra-Cotta Company brought over

from England Mr. James Taylor, superintendent of the well known works which were established by Mr. J. M. Blashfield in 1858. By the introduction of the English methods, the Chicago establishment soon turned out better work than had been produced before in the United States.

The Southern Terra-Cotta Works of Messrs. P. Pellegrini and Z. Castleberry were established in Atlanta, Georgia, in 1871, for the manufacture of architectural and horticultural terra-cotta. Their red and buff garden vases and statuary are justly noted for excellence of design, and their architectural work, for exterior and interior decoration, is of a superior character. Some of their terra-cotta mantels, supported by female figures, and their fire-place and chimney panels are especially meritorious.

The Perth Amboy Terra-Cotta Company, of Perth Amboy, N. J., was incorporated in 1879, and at once embarked in the manufacture of large designs for architectural purposes, from clay obtained in the neighborhood. The plant of this company has expanded so rapidly that at present it includes twenty-two kilns, some of them measuring forty-eight and one third feet in height by twenty-four and one sixth in diameter, which are among the largest of the kind on this continent, if not in the world.

This company has in its employ a number of eminent artists in this particular line, and has furnished terra-cotta details for many prominent buildings throughout the country. Of these may be mentioned the Ponce de Leon Hotel, St. Augustine, Florida; Biological Laboratory,



206.—PANEL IN WAREHOUSE, JERSEY CITY, N. J. PERTH AMBOY TERRA-COTTA COMPANY.

Princeton College ; the Produce Exchange, Cotton Exchange, Washington Market, *Post* Building, *World* Building, Century Club, Racquet Club, Freundschaft Club, Tiffany House, and Mills Building, New York City ; Long Island Historical Building, Brooklyn, N. Y. ; Pennsylvania Railroad Station, Philadelphia, Pa. ; Iroquois Hotel, Buffalo, N. Y. ; Dearborn Station and Rialto Building, Chicago, Ill. ; Hastings Hall, Boston, Mass. ; De Soto Hotel, Charleston, S. C. ; the Montgomery County Court House, Birmingham, Alabama ; Adams Express Company, Cincinnati and St. Louis ; and Masonic Hall, Trenton, N. J.

In addition to the red and buff terra-cotta employed in brick structures, this company also manufactures a white terra-cotta which has been used in the Madison Square Garden, Imperial Hotel, *Judge* Building, Edison Building, New York City, and many other large edifices.

The officers of this company are Mr. E. J. Hall, president, Mr. W. C. Hall, vice-president and Mr. G. P. Putnam, secretary and treasurer.

The Winkle Terra-Cotta Company, of Cheltenham, St. Louis, Mo., commenced business in 1883. They manufacture a high grade of architectural terra-cotta in a variety of shades to match the different colors of building bricks. The officers are Mr. Joseph Winkle, president, Mr. Andrew Winkle, vice-president and Mr. John G. Hewitt, secretary and treasurer.

The New York Architectural Terra-Cotta Company, of which Mr. Walter Geer is president, was organized in the latter part of 1885, and the services of Mr. James



207.—THREE KILNS. PERTH AMBOY TERRA-COTTA COMPANY.

Taylor were secured to superintend the works. On the 10th of May following, the first kiln of terra-cotta was burned, in the newly completed works at Long Island City, opposite 58th Street, New York. The main building is 170 by 115 feet in extent, and six stories in height, and is built of brick and terra-cotta. In 1891 an addition, 95 by 80 feet, was erected in the rear, to accommodate the rapidly increasing business of the company. The twelve kilns are situated on the second floor and the walls ascend through the third, fourth, and fifth floors, thus

helping to warm the apartments and furnishing surplus heat for drying the plastic work in the pressing and finishing departments, which are located there.



208.—BAS-RELIEF IN THE ST. ANTHONY CLUB-HOUSE, PHILADELPHIA, PA. PERTH AMBOY TERRA-COTTA COMPANY.

Designs for architectural purposes are made usually in moulds, except in special work, then turned out on the floor of the drying-room, and, if requiring extra finish, or undercutting, are afterwards carved or modelled by hand. The larger designs are made in sections, of a size that can be conveniently handled by two men. After being sufficiently dried, the pieces are placed in the kilns, where they remain about seven days in the burning and cooling processes.

The Long Island City Works have furnished details

for more than two thousand buildings, scattered throughout the principal cities of the Union. Among these may be mentioned the McIntyre Building, Manhattan Athletic Club, Music Hall, Plaza Hotel, and Colonial Club, of New York City, and the Montauk Club of Brooklyn. The latter, designed by Mr. Francis H. Kimball, architect, is an elaborate Venetian Gothic structure, in a combination of three colors. The terra-cotta is of a pure yellow, in surface ornamentation, upon a soft, brown ground, with columns of Indian red, the whole framed in a setting of bright buff brickwork.



209.—MILITARY PANEL, G. A. R. MEMORIAL HALL, WILKES BARRE, PA.
NEW YORK ARCHITECTURAL TERRA-COTTA COMPANY.

A medallion portrait of Jahn is an example of vigorous treatment in terra-cotta sculpture and is one of a set of three made for the Turn Hall, Trenton, N. J. The others are portraits of Goethe and Schiller. These heads, made of white terra-cotta, form a harmonious and pleasing contrast with the light Pompeian color of the brickwork, and the semi-glazed old-gold color of the adjacent terra-cotta.

The New York Architectural Terra-Cotta Company have lately produced a white terra-cotta which is said to

be fully equal to the red in durability and hardness, which has been used recently in the rebuilding of Harrigan's

Theatre and in the Fifth Avenue Theatre, New York. The effect is novel and pleasing. The latter is one of the best examples of the new development of white terra-cotta in New York. The color of the brickwork, which forms the ground, is lemon or pale yellow. The lower story is constructed of white marble from Vermont, and the effect is peculiarly appropriate in tone and richness of detail for a structure devoted to the higher order of histrionic amusement.

In Illustration 210

may be seen one of a pair of panels in this theatre emblematic of dancing and singing which are used in the



210.—PANEL IN FIFTH AVENUE THEATRE, NEW YORK. N. Y. ARCHITECTURAL TERRA-COTTA CO.

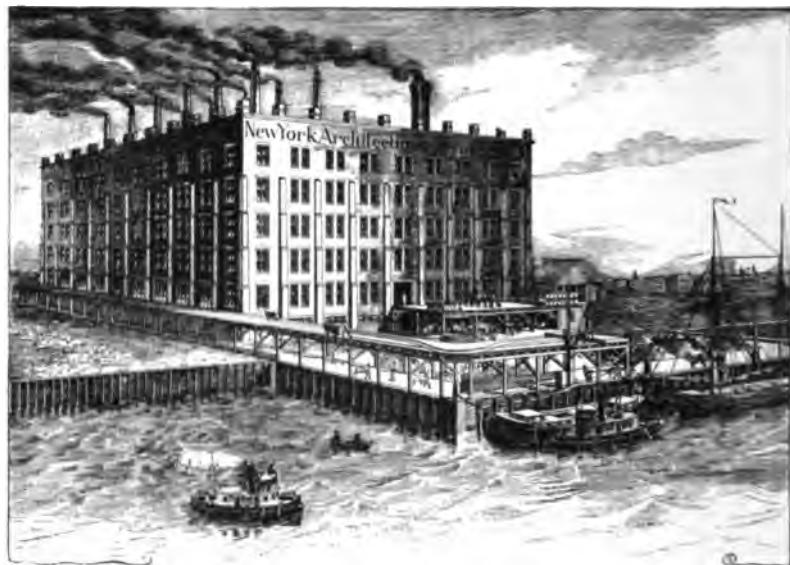
upper foyer windows. The experiments already made by this company and others in the production of a white terra-cotta have proved highly satisfactory, and it now seems only a question of time when the more perishable marble, as a building material, will be superseded by this more enduring substitute.

The color of terra-cotta is governed by the character of the local clays used in its manufacture. Until recently the red brick used almost exclusively in the Eastern States necessitated the employment of blood-red terra-cotta, but since the low rates of freight have of late years enabled our architects to use extensively different colored bricks from various localities, the demand for other tints of terra-cotta has increased. It has been ascertained that the color of the material has little relation to its strength or durability. The weather-resisting quality of burned clay is due to the presence of metallic oxides, which act as fluxes in the process of burning, thus cementing the particles of silica and alumina together, the color being im-



211.—PANEL IN RESIDENCE OF MR. GEORGE
ALFRED TOWNSEND, GAPLAND, MD.
NEW YORK ARCHITECTURAL
TERRA-COTTA COMPANY.

parted by the predominating oxide. Iron produces red, manganese black or gray, and white calcium creates a buff or light tint. The entire absence of oxides results in a white body which is difficult to vitrify on account of the want of fluxes, hence it is not suited for a building material, but by the use of a good weather clay for the body and the application of a skin of fine white clay, the



212.—WORKS OF THE NEW YORK ARCHITECTURAL TERRA-COTTA CO.,
LONG ISLAND CITY, N. Y.

terra-cotta is made equally hard and durable, as the skin takes up enough of the flux from the main body to render it of an equal weather value without seriously affecting its purity of color. That the New York Architectural Terra-Cotta Company has succeeded in producing a material answering to these requirements is amply demonstrated in a specimen which is now before me, which is of a

beautiful creamy whiteness, fine texture, and of the necessary hardness.

The Boston Terra-Cotta Company, of Boston, Mass., manufacture architectural and decorative terra-cotta, also *faience* or glazed terra-cotta for interior and exterior embellishment. Probably the most notable work of the latter class thus far produced is the interior decoration of the cor-



213.—MEDALLION OF GENERAL WINFIELD S. SCOTT.

ridors of the Charlesgate and the Adams House of Boston. Of the many prominent buildings throughout the country for which architectural terra-cotta has been furnished by this company, the Barnum Institute of Science and History, of Bridgeport, Conn., may be mentioned as a fair example. This structure contains a frieze divided into panels repre-

senting the different epochs in the history of Bridgeport, with figures about half the size of life. Medallion busts of eminent men, of heroic size, are inserted between the panels, which are remarkable for their fidelity to nature.



214.—FLORAL PANEL. STEPHENS, ARMSTRONG, & CONKLING.

Those of the late Mr. P. T. Barnum, the donor of the building, and General Winfield S. Scott, are especially praiseworthy as examples of lifelike portrait-modelling. Messrs. Fiske, Coleman, & Co. are the managers of the

Boston Terra-Cotta Company, as well as managers and agents of the Boston Fire-Brick Works, and associated with them are Messrs. Atwood & Grueby, in the production of architectural *faience*.

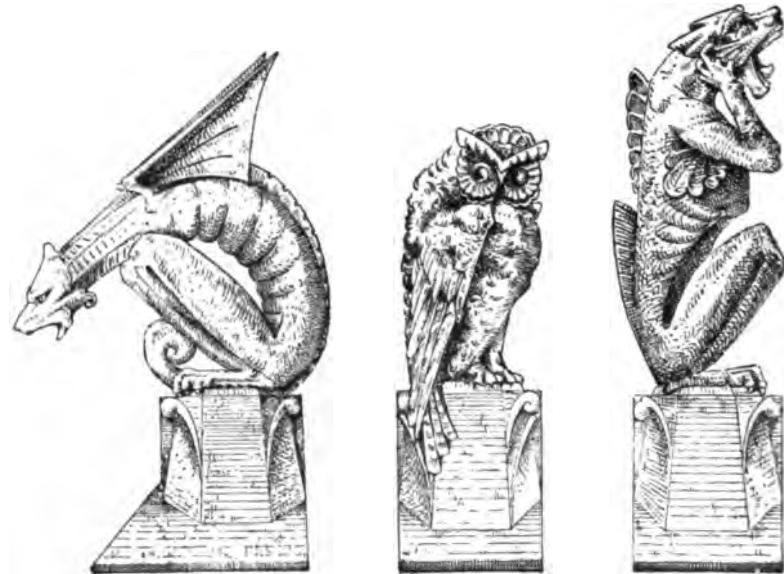
In 1886 Messrs. Stephens & Leach started a factory for architectural terra-cotta in West Philadelphia, and later the firm name was changed to Stephens, Armstrong, & Conkling. During the six years of the works' existence they have furnished material for hundreds of important structures in Philadelphia and other cities, of which particular mention may be made of panels and gable work in the library of the University of Pennsylvania, and the Drexel Institute, West Philadelphia. A series of animal-head medallions, in high relief, are particularly excellent, and some bas-relief portraits of eminent men, modelled by such sculptors as H. J. Ellicott, John Boyle, and E. N. Conkling, are among their best productions. A medallion of Columbus by Mr. Conkling, and a Cupid and floral panel by Thomas Robertson, are here represented. Admirable work is also being produced by other establishments in Boston, Chicago, and most of our larger cities.

The Indianapolis Terra-Cotta Company, located at Brightwood, Indiana, commenced business, under its



215.—MEDALLION OF COLUMBUS.

present management, in 1886. Mr. Benjamin D. Walcott is president and treasurer, Mr. William F. Stilz, vice-president, and Mr. Joseph Joiner, secretary and superintendent. The latter is a gentleman of large experience in this field, and a highly qualified architect.



216.—FINIALS. INDIANAPOLIS TERRA-COTTA COMPANY.

The products of these works are architectural and horticultural terra-cotta, of excellent quality and workmanship.

Since about 1880 the demand for architectural terra-cotta has rapidly increased, and to-day many manufactories are in operation in various parts of the country.



CHAPTER XVIII.

AMERICAN MARKS AND MONOGRAMS.

MANY important facts pertaining to American pottery and porcelain have been allowed to pass into oblivion for the want of a chronicler, and more than one erstwhile prominent pottery has been forgotten, and the unmarked wares, once celebrated, have seemingly disappeared, without leaving a trace to show that they ever existed. We must be content with the bare information that certain products were manufactured by our ancestors, who, when they passed away, carried the knowledge of their works with them. Who is there to-day that can identify a single piece of the white ware or "chiney" produced at Burlington, N. J., in 1688? What collector can positively assert that he possesses a veritable example of the "tortoise-shell," or "green colour" ware made in 1769 at the Boston factory? Where can be found an authenticated specimen from the China Manufactory which was turning out queensware in Philadelphia in the year 1800?

In the older countries of the East, it has been the custom for centuries to place upon ceramic wares, which were considered worthy of preservation, distinguishing marks, monograms, or symbols, by which their origin

should be known for all time. Had such precaution been adopted by our earlier American potters, many a priceless gem would now grace our collections, for many a suspected rarity can be found in our private cabinets and public museums believed to be American, but, alas, unauthenticated. Before me stands a quaint old porcelain coffee-pot, embellished with bunches of hand-painted roses, which tradition assigns to the city of Penn previous to the Revolution, yet we have no knowledge that polychrome decoration was practised in this country at that period. Here is a graceful teapot of somewhat similar body, decorated with clusters of minute flowers in natural colors and bronze bands, bought of a dealer on the assurance that it, also, had been made in Philadelphia more than a century ago.

On the other hand, unmarked pieces of undoubted genuineness have been handed down to us carefully from the time of our grandparents, and by means of these the ceramic student may hope to be enabled to penetrate the veil of uncertainty which surrounds others. Fortunately, we find now and then a specimen bearing a mark among the productions of discontinued factories of the present century. We can at least commence now to gather together what is still to be procured from the past and to collect material for the history of the potter's art as it exists in America in our own time. Further delay would seem inexcusable, because it would result in the loss of information, which, while now obtainable, could not be procured a few years hence.

No attempt has ever been made, so far as we know, to compile a list of marks and makers' designs on Ameri-

can wares. That which follows is, therefore, necessarily imperfect, but it will serve as a nucleus for the preparation of a more complete one hereafter. It has not been deemed necessary to include all of the trade marks which occur on the ordinary utilitarian or commercial grades of recent wares, many of which appear in the body of this work.

THE AMERICAN CHINA MANUFACTORY,
PHILADELPHIA, PA.

Tucker & Hulme.
Philadelphia.
1828

Mark used in 1828, *painted* in red, beneath the glaze. A porcelain vase-shaped pitcher thus marked was presented to the Pennsylvania Museum in Fairmount Park, Philadelphia, by Mr. Charles Henry Hart.

Tucker & Hulme
China Manufacturers
Philadelphia.
1828

Another mark used in the same year. Three decorated porcelain pitchers are known which bear this inscription, in red.

*Manufactured
by Joⁿ Hemphill
Philad—*

²⁶

In 1833 and 1834, after the factory had passed into the hands of Judge Joseph Hemphill, this mark was used to a limited extent on decorated pieces. It also was painted in red under the glaze.

Workmen's Marks.

These were scratched in the paste beneath the glaze. They are numerous on Tucker and Hemphill porcelain, but at this late day very few of them can be identified. Only those which have been recognized are given.



This letter occurs frequently on fine pitchers and other pieces, and was used by Andrew Craig Walker, who worked at this factory as a moulder.



The private mark of Joseph Morgan, a moulder.



Mark of Charles Frederick, a moulder.



William Hand, an Englishman and a well-known potter in the old Philadelphia potteries.



The mark of one Vivian, a Frenchman.



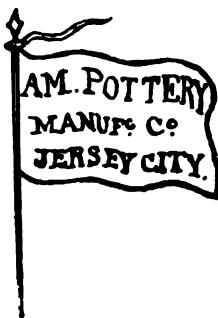
Mark *impressed* or stamped in the red body of *Sgraffiato* ware made by Jacob Sholl, near Tyler's Port, Montgomery Co., Pa., in 1831. Two ornate earthenware jars from this pottery have recently been found bearing this

mark, which was evidently made with an engraved stamp. Decorated dishes from the same pottery bear the above date.

THE JERSEY CITY POTTERY.



Mark used by D. & J. Henderson of the Jersey City Pottery, about 1830. It occurs on a stoneware "Toby Jug," *impressed* in the body.



Mark used about 1840 by the American Pottery Co. of Jersey City, N. J. This occurs on a cream-colored water-pitcher, with black printed portrait of General William Henry Harrison, and picture of log-cabin. The mark is *printed* in black beneath the glaze.



Mark used at Jersey City Pottery from 1840 to about 1845, impressed in the ware.



Impressed mark used at Jersey City Pottery about 1840 and later. This is found on a many-sided pitcher with Toby head.

THE UNITED STATES POTTERY,

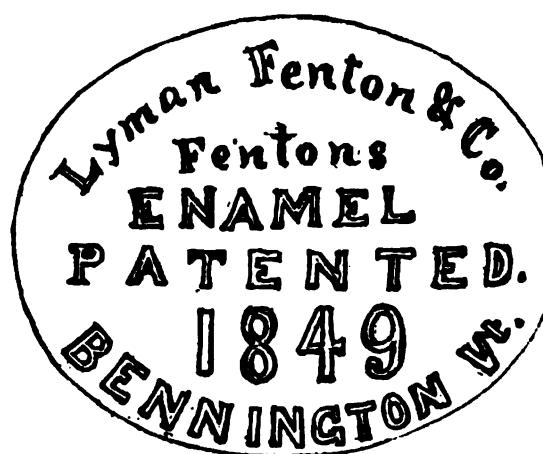
BENNINGTON, VT.



Mark found on a few pieces of parian ware supposed to antedate the establishment of the U. S. Pottery, Bennington, Vt. Letters impressed in a raised panel.



Mark used at the United States Pottery of Lyman and Fenton, Bennington, Vt., on parian and porcelain about 1853. The letters and figures are impressed in a raised ribbon. The figure to the right varies on different pieces and was probably the pattern number.



Mark used on Lyman & Fenton's Patent Flint Enamelled ware, in 1849. Impressed.



Mark used on "scrodled" and other ware made at U. S. Pottery. Impressed.

A.P.M. C^o

Mark of the American Porcelain Manufacturing Co. of Gloucester, N. J., from 1854 to 1857. Impressed in the body of the ware.



Impressed mark used on telegraph insulators, and probably porcelain, by the Southern Porcelain Company, of Kaolin, South Carolina, previous to, and at the commencement of, the Civil War.

THE CHELSEA KERAMIC ART WORKS.

CHELSEA KERAMIC
ART WORKS
ROBERTSON & SONS.

Chelsea (Mass.) Pottery of James Robertson and Sons. This mark was employed to some extent between 1875 and 1880 and was *impressed* in the clay.

C
K
A
W Stamped or impressed in art pottery made at the Chelsea Keramic Art Works of Robertson and Sons from 1875 to 1889.



Impressed mark used by the *Chelsea Pottery*, U. S., at Chelsea, Mass., on art wares, from 1891. Hugh C. Robertson, manager.

THE UNION PORCELAIN WORKS.



First mark used by the Union Porcelain Works of Messrs. Thomas C. Smith & Sons, Greenpoint, Long Island, adopted 1876 and impressed in their commercial hard porcelain. In 1877 the same mark was *printed* in green under the glaze.



Mark used by same factory since 1877, printed in green under the glaze, on commercial porcelain. In a few instances, this mark has been used in raised ornamental form on large exhibition pieces, as a tablet applied to the bottom of the ware.



Decorating-shop mark used at the Union Porcelain Works since 1879; printed on decorated porcelain, usually in red, over the glaze.



Decorating-shop mark adopted in August, 1891.

GREENWOOD POTTERY COMPANY.



Mark first used on the Greenwood Pottery art wares, at Trenton, N. J., about 1883 to 1886, *printed* in purple. The *Ne Plus Ultra* art pottery was copied from the Royal Worcester, having an ivory finish and raised gold decoration. The figures in the centre indicate the date of the establishment of this factory (1861), the design having been suggested by the Worcester mark.



Stamp used on hard porcelain body art ware, printed in purple beneath the glaze, from 1886 to the present time.



A modification of the above, also used on art ware.

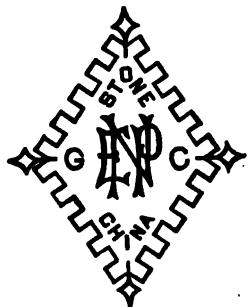
THE NEW ENGLAND POTTERY CO., EAST BOSTON, MASS.



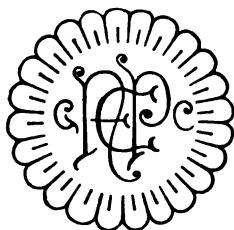
Mark used on ironstone china by Messrs. Thomas Gray and L. W. Clark, from 1878 to 1883.



Bird stamp, New England Pottery Co., used on a special order of goods made by this company for a purchaser. Stamped or printed on plates, etc., in black, under the glaze.



Used on stone china from 1883 to 1886.



Printed in black on "C. C." or cream-colored ware, under the glaze.



Printed in black, under the glaze, on stone china and white granite wares, since 1886.



Printed in black, under the glaze, on "Rieti" ware, from 1886 to 1888.

RIETI



Printed in black, under the glaze, on colored bodies, denominated "Rieti" ware, from 1888 to 1889.



Printed in red, above the glaze, on "Rieti" and the finer decorated wares, since 1889.

ROOKWOOD.

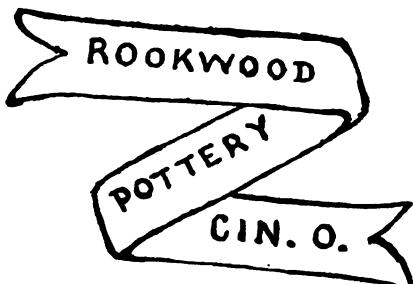


Mark used at the Rookwood Pottery, Cincinnati, Ohio, from 1880 to 1882, to a limited extent. This was designed by Mr. H. F. Farny, and printed on the ware in black, beneath

the glaze. In 1883 a small kiln mark was *impressed* in the ware made during that year.



Mark used on a few pieces in 1882, *impressed* in the clay.



Special mark used only on a trade piece (large beer tankard with raised figures) made expressly for the Cincinnati Cooperage Company, in 1882. The letters are impressed on a raised ribbon.

**ROOKWOOD
1882**

Employed on art pieces made from 1882 to 1886, the date being changed each year. Impressed in the clay.



Mark adopted in June, 1886, and used during the remainder of that year, *impressed*.



In 1887 a flame point was placed above the monogram to indicate that year, and one point has been added each year since, so that the date mark used on pieces made in 1893 possesses seven points.

C	Cream-colored clay.	Body marks impressed in the clay.
R	Red clay.	
W	White clay.	
S	Sage-green clay.	
Y	Yellow clay.	
G	Ginger-colored clay.	
O	Olive clay.	

PHOENIXVILLE POTTERY.



Mark used by Messrs. Griffen & Smith, at the Phœnixville (Pa.), Pottery, between 1880 and 1890, on majolica ware. *Impressed.*



The central monogram was also used on majolica or C. C. ware, alone. It is composed of the letters G., S., & H., Griffen, Smith, & Hill. The words Etruscan Majolica were sometimes impressed in a straight line.



Mark used on a peculiar vitrified porcelain body with underglaze color effects, the color, glaze, and body being thoroughly incorporated together; made by Prof. Isaac Broome at Tren-

ton, in 1880, on a throwing wheel. Only about one hundred small vases of this character were produced. These pieces, different from any other ware made in America, are scattered among collectors, and are highly prized for their beauty and rarity. This mark is an arbitrary one, being a modification of the sign of the planet Jupiter, and should not be confused with that used on old Plymouth (England) porcelain, which is somewhat similar.

THE CHESAPEAKE POTTERY, BALTIMORE, MD.



Mark used to some extent by Messrs. D. F. Haynes & Co., on their "Clifton" ware, belonging to the majolica family. Adopted before 1883.



Used occasionally on "Avalon" ware, about same period.



Used on "Ivory Body" ware, same time.



Used on semi-porcelain ware. These marks, however, were employed only to a limited extent, the greater portion of the ware being unmarked.

ARUNDEL.**ARUNDEL.****GLEN ROSE.**

DEC.

Marks adopted in 1889 to designate the style of decoration and shape. They were printed over the glaze in the same colors as the decoration. The letters C. P. stand for Chesapeake Pottery; H. B. for Haynes and Bennett. Other marks, with slight variations, were also used.



Mark used at the Hampshire Pottery of J. S. Taft & Co., of Keene, N. H., printed in red above the glaze, on art ware of an opaque white body.

THE CINCINNATI ART POTTERY.

The earliest mark of the Cincinnati Art Pottery Co. was a little turtle. Later it was discovered that an Indian name for turtle was "Kezonta," which name was added to the device about 1886. The mark opposite was printed on the finer grades of ware, in red.

**KEZONTA**

Mark impressed on the plainer wares, such as the blue and white pottery for decorators.

OTT & BREWER CO., TRENTON, N. J.



O.B.
CHINA

Mark used on opaque china table ware.



BELLEEK

Mark used on fine egg-shell Belleek ware, printed in red above the glaze.



Another mark in red or brown overglaze.



Willets Manufacturing Co., Trenton, N. J.—Mark printed in red above the glaze, on decorated Belleek ware.

CERAMIC ART CO.



Overglaze stamp, printed on "Belleek" ware, made by the Ceramic Art Co., of Trenton, N. J., in red, since 1889.



Used on art ware of the Pauline Pottery Co. of Edgerton, Wis., since 1888. On the earlier productions this mark was *impressed*. On the later it is *printed*.

LONHUDA

Impressed mark used on underglaze art ware made by the Lonhuda Pottery Co., Steubenville, Ohio, 1892. The lower mark is the monogram L. P. Co. On some of the later pieces, after native American designs, the figure of an Indian's head is impressed.



Mark used on decorated *faience* and porcelain made by the Faience Manufacturing Co. of New York, 1886 to 1892.



Incised mark used on majolica and so-called barbotine ware by the Faience Manufacturing Co. of New York.



Printed mark used on thin art porcelain of the American Art China Works, of Messrs. Rittenhouse, Evans, & Co., Trenton, N. J.



Mark of Messrs. Morris & Willmore, Trenton, N. J., manufacturers of art wares, adopted in 1893.





CHAPTER XIX.

TILES FOR DECORATIVE EFFECT.

NEXT to paintings, etchings, and engravings, nothing can be more effective for wall decoration than artistically modelled tiles, in which color and shading are replaced by contour. The tile designer combines the arts of the painter and the sculptor, and his ceramic creations, partaking both of the nature of pictures and of delicate carvings, are well deserving of a place among the objects of art which adorn the dwellings of the cultured.

It is a remarkable fact that, while the art of tile making in this country is practically not more than fifteen years old, the United States to-day excels the world in the manufacture of relief figure tiles and tile panels. True it is that we have had the benefit of the skill and knowledge of some of the foremost modellers of Europe, who have come to our shores, but we have also developed a number of American sculptors, whose work, in this direction, has fully equalled the best that has yet been accomplished. Within the past year or so we have progressed with such marvellous rapidity in the mechanical, as well as the artistic, treatment of clays and glazes, that we are now able to produce tile panels of eighteen to thirty inches in length,

in a single piece, with almost the same facility with which it was possible formerly to make six-inch tiles. Many of these tile sculptures are genuine works of art, and should be displayed in a tasteful and appropriate manner.

What we call taste is merely the ability to recognize that which is beautiful. We are endowed with what is commonly termed good or poor taste according to the degree of perfection to which this faculty has been developed. He who is said to possess poor taste is that one who is deficient in this perceptive faculty, and is therefore unable to appreciate the harmonious relation of conditions which constitute the beautiful. Fashion is often the perverter of taste, and fashions frequently change, but beauty is ever governed by fixed laws of nature. And so, when we see a beautiful picture in clay, modelled with the skill of a true artist, it is not a mere "matter of taste," or, in other words, a question of individual opinion as to the manner in which it shall be mounted to bring out its beauties the most effectively. We are too prone to accept the dictates of fashion in such matters, without regard to the suitability of contrasting materials, but experiment will often point out to us the path which leads to good taste. Thus custom has almost succeeded in convincing us that a glazed art tile, when used for decorative effect, should always be placed in a perishable, plush-covered frame, instead of in a light, graceful setting. Fashion might seek to persuade us that a fine oil painting would appear to the best advantage in a framework of incongruous velvet, but good taste could never be thus deceived. The coloring of the canvas requires the plain, rich contrast of the gilded frame. On

the other hand such a setting would prove unsuitable for tiles, except in rare instances, as where white or cream-colored designs are mounted in light openwork frames of gold.

We see in the window of one of the foremost art stores a modelled tile surrounded with a broad plush frame, decorated with brass mountings. The whole appears stiff, dull, and unattractive. We place a similar panel in a light wooden frame of soft ivory white, deli-



217.—LIGHT BLUE DOUBLE PANEL, OXIDIZED SILVER FRAME. LOW ART TILE.
DESIGNED BY ARTHUR OSBORNE.

cately carved and pierced, and the surface at once lights up with life, and its beauties are fully revealed.

The coloring of the glaze or enamel which covers the tile sculptures must largely govern the character of their setting. In general, dark-colored tiles should be framed in ivory white. Light-blue may be, with good effect, placed in wooden frames of oxidized silver, but in all cases the moulding should be chased or carved to produce the appearance of lightness. In some instances a border of delicately tinted silk plush may be inserted between the

frame and picture, as, when the former is of old ivory and the latter of a cool gray color, a narrow line of pink or light terra-cotta may be added with excellent results. An ochre or burnt umber glaze will often harmonize with a terra-cotta moulding, but the ivory-colored frame will produce a dainty effect in combination with almost any tint of glazing.

Beautiful as are the highly glazed and enamelled products of the tile kiln, they sometimes acquire an additional charm when subjected to the sand-blast process, which imparts a softness and delicacy of effect to the sculptures not otherwise obtainable. The achievement of a dull finished surface on decorative tiles is a distinct step forward in the direction of artistic treatment, just as the dull gold ornamentation of a



218.—“SAPPHO.” PURPLISH-GRAY GLAZE,
IN IVORY FRAME AND PINK PLUSH BORDER.
BEAVER FALLS ART TILE CO.
DESIGNED BY PROF. ISAAC BROOME.

porcelain vase is generally a vast improvement over the harsh burnished gilding which is so often suggestive of commercial cheapness. To this latter style of tile finish the judicious application of plush mountings would be more harmonious than to a glazed surface, and, in certain instances, as where a tile of a delicately tinted, velvety surface is framed in plush of a darker shade of the same color, a rich effect may be secured.

A six- by eighteen-inch pastoral panel, made by the Trent Tile Company, of Trenton, N. J., in their "Trent finish," is here figured. The glaze is of a dainty shade of claret, the frame of old ivory (Ill. 220).

The framing of art tiles should be governed, in a large degree, by the subject of the design, and the same may be said of the tinting of the glazes employed. Panels symbolical of the four seasons should be colored, as a general rule, in keeping with the idea intended to be conveyed. Thus "Spring" should be finished in a delicate apple-green or apple-blossom pink; "Summer" in azure blue; "Autumn" in light red-brown or umber, and "Winter" in a dainty shade of French gray. Suitable frames for these tones of glazing are white or blue, oxidized silver with pink ornamentation, dark terra-cotta, and pink, respectively. A set of twelve- by eighteen-inch "Season" panels, so finished, by the American Encaustic Tiling Company, of Zanesville, Ohio, and mounted in accordance with these suggestions, are among the most beautiful works of art in our collection.

In hanging framed tiles, it would be well to choose subjects which are in keeping with the positions selected.



219.—OLIVE-GREEN GLAZE IN OLD
IVORY SETTING. LOW ART
TILE. DESIGNED BY
OSBORNE.



220.—PASTORAL PANEL IN DULL FINISH. GLAZE OF PALE CLARET, FRAMED IN OLD IVORY. TRENT TILE COMPANY. MODELLED BY GALLIMORE.



221.—“SPRING” PANEL. PALE APPLE-GREEN GLAZE, FRAMED IN PINKISH WHITE. AMERICAN ENCAUSTIC TILING CO. DESIGNED BY HERMAN MUELLER.

Ideal heads, modellings of child and female forms, and designs after paintings may with propriety be placed in the parlor; portrait tiles and plastic sketches, in the library; game and sporting tiles, in the dining-room or hall; while designs of a more general character, such as pastoral and season panels, may, with good taste, be hung in any part of the house.

Art tiles may also be utilized in other ways for interior decoration. A good effect may be obtained by attaching a set of three framed panels to the woodwork of the mantel facing, a vertical design being hung or nailed on each side and a horizontal one across the top. When so utilized, the tile frames should harmonize, in material and carving, with the background.

By thus applying æsthetic principles to the preparation of art tiles for interior decoration, incongruous combinations of colors and materials, which detract from the beauty of the objects themselves, are avoided and we have genuine works of art which are creditable alike to



222.—THREE-TILE PANEL—“TWILIGHT.” BLUE GLAZE, CREAM WHITE FRAME. UNITED STATES ENCAUSTIC TILE WORKS. DESIGNED BY MISS RUTH WINTER-BOTHAM.

the modeller, the manufacturer, and the purchaser. Already our tile-makers have produced many of these "pictures in clay," which, as examples of the fine arts, are worthy of a place in any home, and the rapid development of this branch of the ceramic art promises to furnish us, at an early day, with works of a still higher art value, which are destined in a great measure to replace the more expensive paintings and water-colors on the walls of our dwellings.





CHAPTER XX.

CONCLUDING REMARKS.

THE history of pottery and porcelain in America, as presented in the foregoing pages, may be summed up briefly as follows :

Building bricks were made in Virginia as early as 1612.

White ware was first manufactured in this country about 1684.

Clay tobacco-pipes of European design were probably first made in America in 1690.

Terra-cotta roofing tiles were made in Pennsylvania previous to the year 1740.

Slip-decorated earthenware was fabricated in Pennsylvania as early as 1760.

The earliest attempt to manufacture white ware (and possibly porcelain) with underglaze decorations was made in Philadelphia in 1770.

William Ellis Tucker, of Philadelphia, was the first to successfully produce hard porcelain, in the year 1825.

The first Rockingham ware was made in the United States at East Liverpool, Ohio, by James Bennett in 1839.

Transfer printing from engraved plates was first ap-

plied to pottery in this country at the Jersey City Pottery previous to 1840.

Parian ware was first produced at Bennington, Vermont, about the year 1846.

Inlaid floor-tiles were made at the United States Pottery in Bennington in 1853.

Pottery coat-buttons were manufactured at Norwalk, Connecticut, about the same time.

Architectural terra-cotta was not made in the United States until about 1870.

Ornamental relief tiles were not produced until after the Centennial Exposition.

Belleek or egg-shell porcelain was first made in this country, at Trenton, in 1884.

The Great Exhibition of 1876 marked the ceramic art movement which has since resulted in the wonderful development of the pottery industry in this country.

For more than a century intelligent and public-spirited men and women in Europe have been interested in gathering together, from the four corners of the globe, examples of ceramic manufactures, which, above all other objects of human industry, have been instrumental in recording the history of nations, the customs and manners of peoples, and the artistic progress of races. Sovereigns and subjects have vied with each other in forming collections of the quaint, the curious, the beautiful in art, as exemplified in the handiwork of the potter.

In our own country no serious attempts were made in this direction by collectors until a comparatively recent period, and previous to 1876 but few private or public

collections of potteries or porcelains could be found in the United States. Since the Philadelphia Exhibition, however, widespread interest has been awakened among students and collectors in the ceramic art, and to-day many valuable cabinets are to be found in the land filled with rare and costly examples of Old World skill. We have our specialists who confine themselves to the study of Oriental art; our collectors of Grecian and Roman potteries; our ceramists who are particularly interested in the wares of mediæval Europe, of Sèvres, of Wedgwood, and a few general collectors who cover the fictile arts of the world. The one fertile field, however, from which we may expect to reap the most abundant harvest, has thus far been neglected, although a step has been made in the right direction by one of our prominent public institutions, the Pennsylvania Museum, of Philadelphia, which has recently commenced the formation of a collection of American wares to illustrate the history and development of the potter's art in the United States from the first settlement of the country to the present time, which shall serve as a permanent reference collection for the student and the artisan.

The unreasonable prejudice which has heretofore existed against American ceramic production is rapidly disappearing as the discriminating public becomes more familiar with them. One of the foremost pottery concerns in this country, which was a few years ago forced to remove its trade-mark from its goods, in order to insure their sale in the home market, has recently resumed the marking of its wares, because the people have discovered

that they are fully equal, in every respect, to imported china of the same class. It has not been more than three or four years since a leading jewelry establishment in one of our large cities refused to handle the thin Belleek china made in Trenton, unless stamped with a foreign or misleading mark. To-day these wares are meeting with an extensive sale on their own merits and through the domestic marks which are placed upon them.

Our potters are themselves largely responsible for the ignorance of the American public in respect to the progress which has been made in this country in ceramic manufacture. The inquirer is met at the outset by an almost insurmountable difficulty in ascertaining where many of the best wares are to be procured. Some of the most meritorious productions of prominent potteries are rarely seen on sale outside of their respective warerooms, and a search through the crockery shops of any of our cities will bear but scanty fruit in the discovery of American wares. Even in Trenton, the manufacturing centre for the finest American goods, it is impossible to see the various manufactures of different establishments without visiting some thirty separate works. Not until a permanent bourse or exchange shall be established, by a combination of the potters of this country, can the general public be fully educated to the knowledge that the best pottery and porcelain can be purchased at home. The petty jealousies which actuate many of our manufacturers must be overcome, and they must consent to enter into friendly rivalry before they can hope to successfully present their claims for popular favor. Every important city should have its

exchange where the best wares from all sections can be congregated together for examination and comparison. Such a movement would benefit all of our potters and eventually result in the decreased consumption of imported goods and the large increase of exports.

Another means of fostering, to some extent, our home manufactures would be the refusal to admit foreign-made wares to any of our exhibitions of decorative execution. Awards of merit should be confined to work done by our professionals and amateurs *on American bodies*. There is no reason for the selection of imported china by decorators when our own manufactories are producing wares for ornamentation in sufficient variety and of equal, if not superior, excellence to any that are imported for this purpose.

The possibilities of American art should appeal strongly to our art patrons, and our potters should receive the encouragement which wealthy connoisseurs have heretofore confined to foreign factories. Where could their patronage be more worthily and profitably bestowed than upon the artistic conceptions of our manufacturers, which only need proper recognition to insure greater originality and a still higher order of merit?

We cannot but believe that it should be the duty of those high in authority in the National Government to give their support to this branch of our national industry. The un-American sentiment which actuates the ordering of a service of china from abroad for use in State ceremonies should be discountenanced by our patriotic citizens. We are fully capable of producing table services equal to the best that can be obtained from foreign factories, and

our manufacturers are certainly entitled to official recognition. It is gratifying to know that already some of our Chief Executives have patronized home manufactures by commissioning Americans to make special services for the White House, and the recent example of a cabinet officer selecting a dinner set for his own table from a Trenton factory, after considering many which were submitted in competition, is one which, we trust, may be extensively emulated in the future.

Thus far our potters have been, in a great measure, imitative rather than inventive, and the result is that we have largely reproduced, though in a most creditable manner, patterns and designs, bodies, glazes, and decorations, of foreign factories. With some few exceptions, our commercial manufacturers have been content to copy and imitate the products of foreign establishments and have, in consequence, unconsciously assisted in perpetuating certain offences against good taste, as, for instance, in the continued production of the ancient style of table plates with depressed centres and horizontal borders, the modern use of individual salts, butters, and bread and butter plates rendering the plate rim no longer necessary. It should, therefore, be discarded as being obsolete and inelegant. The most convenient, useful, and graceful form of plate is that with the simple, sweeping, curved line, not made, however, except by a few progressive English potters.

Our producers have also yet to learn that modern table etiquette demands a reduction in the size of many pieces intended for family use. It is no longer necessary to make butter dishes and gravy boats large enough to

serve the purpose of vegetable dishes, nor the latter of a capacity sufficient for an ordinary soup tureen. The increasing refinement of our modern civilization rebels against the continued use of the capacious and clumsy utensils of pre-Centennial times. While the quality of our domestic table wares is not inferior to that of the foreign, the commercial element in design and workmanship must be made secondary to the artistic before our manufacturers can expect the more cultured classes to abandon, to any great extent, the imported for domestic manufactures. We are progressing rapidly in the right direction, however, and some of the designs of a few of our more progressive potteries have been copied extensively by English and German factories. The modelling of pieces for services is receiving more careful attention, and underglaze decorations are gradually superseding the inappropriate and unsubstantial overglaze work in table ware.

One of our acquaintances, who is greatly interested in American china, recently conceived the idea of giving a series of mid-day entertainments to her lady friends, which she christened "American Luncheons," for the reason that not only was the bill-of-fare distinctively American, but the china ware used on the table was entirely of American manufacture. As this suggestion may be followed by others with profit, we subjoin a sample

MENU.**BLUE POINTS ON HALF-SHELL.**

(Oyster Plates of Mazarine Blue, made by the New England Pottery Co., East Boston, Mass.)

BOUILLOON.

(Two-handled, covered cups, Belleek ware, made by the Willets Manufacturing Co., Trenton.)

CREAMED SALMON. SARATOGA CHIPS.

(Semi-Porcelain Plates, Clifton shape, underglaze blue " peony " decoration, made by the Chesapeake Pottery, Baltimore, Md.)

BROILED QUAIL, Currant JELLY.

(Semi-Porcelain Plates, underglaze Royal Blue decoration, made by International Pottery Co., Trenton.)

SWEETBREAD PATÉS.

(Fluted China Shells, made by International Pottery Co., Trenton.)

BREADED LAMB CHOPS WITH MUSHROOMS.

(Thin vitreous China Plates, made by the Greenwood Pottery Co., Trenton.)

TOMATO SALAD.**CHEESE AND WAFERS.**

(Thin China Plates, made by Knowles, Taylor, & Knowles, East Liverpool, O.)

NESSELRODE PUDDING.

(Ice-cream cups on platters of thin Belleek China, made by Ceramic Art Co., Trenton.)

COFFEE.

(After-Dinner Coffees of Egg-Shell China, made by the Ott & Brewer Co., Trenton.)

At the four corners of the centre-piece were Cupid candelabra, made by the Ceramic Art Co., and in the centre an artistic *jardinière* from the Burroughs and Mountford factory, of Trenton, containing ferns. On the table were *faience* almond-shells in underglaze decoration, from the Rookwood Pottery, Cincinnati, with salted

peanuts; *bonbonnières* in underglaze, triangular and heart-shaped, after the Japanese Kioto ware, made at the Pauline Art Pottery, Edgerton, Wis.; individual salts of pink Belleek, in the form of snail-shells, from the Etruria Pottery of Ott & Brewer; bread and butter plates, from the Willets Manufacturing Co., and butter spreaders, with decorated china handles, made by the Ceramic Art Company. Beside each guest was a delicate souvenir consisting of a china shell flower, holding sweet violets, from the American Art China Works of Trenton. No foreign productions could be more dainty and artistic than this combination of domestic wares, though selections from other American potteries could have been made with equally satisfactory results.

Some of the most prominent ceramic artists and artisans of England, France, and Germany are now connected with our American manufactories, contributing their experience and skill in the elevation and improvement of the standards of our productions. The United States have also produced potters, designers, decorators, and modellers who stand in the front rank of progressive workers in this branch of industry, and the art schools and industrial institutions which have been established in many parts of the land are educating our youth in the practical arts, and preparing them for this new field of labor. It is to be hoped that, at no very distant day, a National School of Pottery and Porcelain may be instituted, under the auspices of the Federal Government.

The day is not far distant when the legends, "Made in England," "Made in France," or "Made in Germany"

will not be necessary to insure the sale of ceramic productions in this country. On the contrary, we are rapidly approaching that time when the purchasing public will discriminate in favor of such wares as shall bear the marks of domestic manufactories, or the words "*Made in the United States.*"





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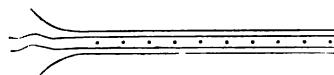
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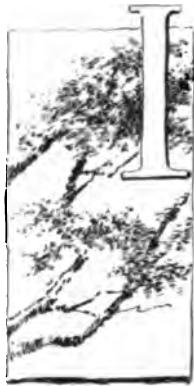
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